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ABSTRACT

Intended to acquaint fifth-, sixth-, and seventh-grade children with the concept of culture, this anthropology unit focuses on two groups of Indians who lived in prehistoric times and present-day non-Indian families living in the Midwest. Objectives are to help students understand the behavior of the Northwest Pacific Coast Indians, the Hopi Indians of the Southwest, and the Midwest families by studying their social organization, homes, villages, work, games, sports, food, dress, religious beliefs and practices, societies, dances, ceremonies, myths, art forms, and the natural vegetation and resources of the areas in which they live. Unit activities are many and varied. For example, students read and discuss books, view films, do library research, write reports, make topical outlines, make bulletin boards, give oral reports, and participate in classroom discussions. Included in the unit are lists of resources to be used and a chart indicating unit content and objectives. The appendices, which comprise about two-thirds of the document, contain supplemental material for each of the units, including newspaper articles, essays, lists of vocabulary and terms, short reading selections, diagrams of family trees, a pronunciation guide, and evaluation instruments. (RM)

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THREE CULTURES

The Hopi Indians of the Southwest Desert, The Indians of the Northwest Pacific Coast, and the People of Midwest U.S.A.

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SO 015 160

An Anthropological Unit

by

Mary Lee Marksberry

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Mary Lee Marksberry
Professor Emeritus
University of Missouri-Kansas City

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THREE CULTURES

The Hopi Indians of the Southwest Desert, The Indians of the Northwest Pacific Coast, and the People of Midwest U.S.A.

Introduction

This unit is designed to acquaint fifth, sixth, and seventh grade children with a beginning concept of culture and to further some of the basic skills underlying thinking. Three groups of people are studied. Two of these groups lived in pre-historic times in North America--the Northwest Pacific Coast Indians and the Hopi Indians of the Southwest Desert area. The third group lived in the Midwest. It was chosen because the learners who were used in the trial runs lived in Kansas City, Missouri. The modern group with whom the pre-historic groups are compared should always be the group to which the learners belong.

A unit which samples substantive content primarily from the field of anthropology is important for two reasons. First, it provides a basis for understanding behavior of people--one's own included. This is done through helping children acquire knowledge about the physical and cultural range of human differences and about reasons anthropologists give for these variances. Second, it provides a basis for a better understanding of the viewpoints of others. This in turn contributes to being more effective in adapting to or influencing social and cultural change.

A serious attempt is also made to provide for the sequential development of basic skills underlying thinking, thus helping learners grow toward becoming autonomous thinkers.

Main Ideas

The substantive outline of content (listed as Content Aspects I through V on Chart I (pp. 4-8) was selected from the vast amount of information about Anthropologists and Their Work, the Northwest Pacific Coast Indians, the Hopi Indians of the Southwestern Desert area, and present day people living in the Midwest as having value for explaining, illustrating, relating, organizing, and developing the following Main Ideas:[1]

Main Idea I. Anthropologists seek to understand the way people adapt to and use the environment in which they live. The way people use and adapt to their environment is called their culture. The living conditions of a group of people are determined to a large extent by the resources in their environment and how they have learned to adjust to these conditions and to control and adapt the environment to meet their needs.

Main Idea II. The family is the basic social unit of people all over the world, no matter what their color, religion, natural environment or social condition might be.

Main Idea III. Culture is socially learned and consists of knowledges, beliefs, values, and habits, which humans have evolved to establish rules of group life and methods of adjusting to and exploiting the natural environment.

---

[1] The basic references used for selecting the main ideas were John U. Michaelis and A. Montgomery Johnson (editors), The Social Sciences: Foundations of the Social Studies (New York: Allyn and Bacon, Inc., 1965), pp. 179-183; 324-329; and Ina Corrine Brown, "What is Valued in Different Cultures?" Educational Leadership 27 (November, 1969), 151-154.

Main Idea IV. The culture within which a belief, custom, or food habit exists must be considered in order to understand it.

Main Idea V. Each culture provides guides to accepted behavior. In sharing a culture one learns to conform with the patterns of that culture if he is to continue to participate as a member of that society.

Main Idea VI. The totality of culture which has been developed by mankind consists of many different adaptation by many different societies.

Objectives

Selection of Objectives

Objectives for this unit were secured from studying the demands of society, the characteristics of children in grades 5, 6, and 7, and the suggestions of subject specialists in the social sciences--especially the writings of anthropologists. Objectives from these sources were screened through a social and educational philosophy which emphasized democratic values as well as a strong belief that the elementary school should be concerned with objectives personally and socially significant for all children, and through a psychology of learning to insure conformity with conditions of learning.

Types of Objectives

Three types of objectives are emphasized: knowledge objectives, intellectual ability and skill objectives, and value objectives. Chart I indicates the objectives under each type as well as the behavior and content aspects of each objective.

Note that three of the behavioral aspects are classified as knowledges. The first is "Familiarity with a large number of words,"

Content Areas	Behavioral Aspects									
	Knowledge			Intellectual Ability and Skill						Value
	1. Familiarity with a large number of words	2. Recall of specific facts	3. Knowledge of generalizations	4. Ability to interpret and draw inferences from various types of data	5. Ability to apply	6. Ability to distinguish fact from opinion	7. Skill in reporting using good organization of ideas and statements	8. Ability to form concepts and arrive at generalizations	9. Ability to judge the relevancy for a particular use	10. Active interest in
Anthropologists and Their Work										
1. Archaeologists and Their Work	x	x	x	x	x	x	x	x	x	x
Early Man in Ameria										
1. Indians	x	x	x	x	x	x	x	x	x	x
a. Origins	x	x	x	x	x	x	x	x	x	x
b. Cultural Areas	x	x	x	x	x	x	x	x	x	x
Hopi Indians (as representative of a Pueblo culture)										
1. Natural Vegetation and Resources	x	x	x	x	x	x	x	x	x	x
2. Social Organization	x	x	x	x	x	x	x	x	x	x
3. Homes	x	x	x	x	x	x	x	x	x	x
4. Villages	x	x	x	x	x	x	x	x	x	x
5. Work	x	x	x	x	x	x	x	x	x	x
6. Games and Sports	x	x	x	x	x	x	x	x	x	x
7. Food	x	x	x	x	x	x	x	x	x	x

	Behavioral Aspects									
	Knowledge			Intellectual Ability and Skill						Value
Content Areas	1. Familiarity with a large number of words	2. Recall of specific facts	3. Knowledge of generalizations	4. Ability to interpret and draw inferences from various types of data	5. Ability to apply	6. Ability to distinguish fact from opinion	7. Skill in reporting using good organization of ideas and statements	8. Ability to form concepts and arrive at generalizations	9. Ability to judge the relevancy for a particular use	10. Active interest in
8. Dress of Men, Women and Children	x	x	x	x	x	x	x	x	x	x
9. Religious Beliefs and Practices	x	x	x	x	x	x	x	x	x	x
10. Societies, Dances, Ceremonies, Road of Life	x	x	x	x	x	x	x	x	x	x
11. Myths	x	x	x	x	x	x	x	x	x	x
12. Art Forms	x	x	x	x	x	x	x	x	x	x
IV. Northwest Pacific Coast Indians										
1. Natural Vegtation and Resources	x	x	x	x	x	x	x	x	x	x
2. Social Organization	x	x	x	x	x	x	x	x	x	x
3. Homes	x	x	x	x	x	x	x	x	x	x
4. Villages	x	x	x	x	x	x	x	x	x	x
5. Work	x	x	x	x	x	x	x	x	x	x
6. Games and Sports	x	x	x	x	x	x	x	x	x	x
7. Food	x	x	x	x	x	x	x	x	x	x
8. Dress of Men, Women and Children	x	x	x	x	x	x	x	x	x	x

Content Areas	Behavioral Aspects									
	Knowledge			Intellectual Ability and Skill						Value
	1. Familiarity with a large number of words	2. Recall of specific facts	3. Knowledge of generalizations	4. Ability to interpret and draw inferences from various types of data	5. Ability to apply	6. Ability to distinguish fact from opinion	7. Skill in reporting using good organization of ideas and statements	8. Ability to form concepts and arrive at generalizations	9. Ability to judge the relevancy for a particular use	10. Active interest in
9. Religious Beliefs and Practices	x	x	x	x	x	x	x	x	x	x
10. Societies, Dances, Ceremonies, Cylce of Life	x	x	x	x	x	x	x	x	x	x
11. Myths	x	x	x	x	x	x	x	x	x	x
12. Art Forms	x	x	x	x	x	x	x	x	x	x
V. Midwest U.S.A.										
1. Natural Vegetation and Resources	x	x	x	x	x	x	x	x	x	x
2. Social Organization	x	x	x	x	x	x	x	x	x	x
3. Homes	x	x	x	x	x	x	x	x	x	x
4. Cities and Government	x	x	x	x	x	x	x	x	x	x
5. Work	x	x	x	x	x	x	x	x	x	x
6. Games and Sports	x	x	x	x	x	x	x	x	x	x
7. Food	x	x	x	x	x	x	x	x	x	x
8. Dress of Men, Women and Children	x	x	x	x	x	x	x	x	x	x
9. Religious Beliefs and Practices	x	x	x	x	x	x	x	x	x	x

	Behavioral Aspects									
	Knowledge			Intellectual Ability and Skill						Value
Content Areas	1. Familiarity with a large number of words	2. Recall of specific facts	3. Knowledge of generalizations	4. Ability to interpret and draw inferences from various types of data	5. Ability to apply	6. Ability to distinguish fact from opinion	7. Skill in reporting using good organization of ideas and statements	8. Ability to form concepts and arrive at generalizations	9. Ability to judge the relevancy for a particular use	10. Active interest in
10. Societies and Ceremonies	x	x	x	x	x	x	x	x	x	x
11. Myths	x	x	x	x	x	x	x	x	x	x
12. Art Forms	x	x	x	x	x	x	x	x	x	x
VI. Group Participation and Human Relations	x	x	x	x	x	x	x	x	x	x
VII. Locating and Gathering Information										
1. Library										
a. Card Catalogue	x	x	x	x	x	x	x	x	x	x
2. Use of Books										
a. Table of Contents	x	x	x	x	x	x	x	x	x	x
b. Index	x	x	x	x	x	x	x	x	x	x
c. Title Page and Copyright Page	x	x	x	x	x	x	x	x	x	x
d. Glossary	x	x	x	x	x	x	x	x	x	x
3. Reference Materials										
a. Periodicals		x	x	x	x	x	x	x	x	x
b. Newspapers		x	x	x	x	x	x	x	x	x

Content Areas	Behavioral Aspects									
	Knowledge			Intellectual Ability and Skill						Value
	1. Familiarity with a large number of words	2. Recall of specific facts	3. Knowledge of generalizations	4. Ability to interpret and draw inferences from various types of data	5. Ability to apply	6. Ability to distinguish fact from opinion	7. Skill in reporting using good organization of ideas and statements	8. Ability to form concepts and arrive at generalizations	9. Ability to judge the relevancy for a particular use	10. Active interest in
c. Encyclopedias		x	x	x	x	x	x	x	x	x
d. Maps, Globes	x	x	x	x	x	x	x	x	x	x
e. Charts, Graphs	x	x	x	x	x	x	x	x	x	x

8

the second is "Recall of specific facts," and the last is "Knowledge of generalizations."

Six of the behavioral aspects are classified as intellectual abilities and skills. They are: "Ability to interpret and draw inferences from various types of data," "Ability to apply," "Ability to distinguish fact from opinion," "Skill in reporting, using good organization of ideas and statements," "Ability to form concepts and arrive at generalizations," and "Ability to judge the relevancy for a particular use."

Only one of the behavioral aspects is classified as a value--"Active interest in."

The content aspects of the objectives are listed on the left hand side of the chart. The behavioral aspects are to be developed in relation to these various content aspects.

As was mentioned above, the first five main classifications of content (I through V) have been selected primarily from the foundational discipline of anthropology. They may be thought of as substantive content. Two other types of content are also used. One (VI) has to do with the body of content concerned with the development of the skills of group participation and human relations and the other (VII) is central to the development of the skills of locating and gathering information. The behavioral aspects are as applicable to these types of content as to the content derived from the foundational discipline.

Finally the chart shows the relationship of the content and behavioral aspects of the objectives for the unit. Each X on the chart indicates when a behavioral aspect applies to a particular area of content and becomes an objective when the behavior and content are read together.

Each of the behavioral aspects is given specific meaning in this unit. The meanings are based on the _Taxonomy of Educational Objectives Handbook I: Cognitive Domain_[2] and _Taxonomy of Educational Objectives Handbook II: Affective Domain_.[3]

Definition of Behavioral Aspects

Knowledge Objectives

It was mentioned earlier that three types of objectives are being aimed at in this unit: knowledge objectives, intellectual ability and skill objectives, and affective domain objectives. The objectives indicated as knowledge objectives on Chart I are all concerned with one basic kind of behavior--remembering by recognition or recall certain kinds of information.[4] The kind of information to be remembered varies according to the rest of the behavioral aspect, and the content aspect of the objective.

In the first behavioral aspect "Familiarity with a large number of words" learners are to remember by recognition or recall those words which are important to the content being studied and which are important for them to know if they are to communicate with others about the content being discussed. They must not only be cognizant of these terms but must also know their generally accepted pronunciation and definitions.[5] For example in the first objective "Familiarity with a large number of words about archaeologists and their work," the learners need to know how terms such as the following are pronounced and the common meanings in the context within which they are being used:

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[2] Benjamin S. Bloom (ed.), _Taxonomy of Education Objectives Handbook I: Cognitive Domain_ (New York: Longmans, Green and Co., 1956).

[3] David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, _Taxonomy of Educational Objectives Handbook II: Affective Domain_ (New York: David McKay Company, Inc., 1964).

[4] Bloom, _op. cit._, p. 62.

historians	- people who study the written records of the past.
prehistory	- a time when nothing had been written down.
archaeologists	- people who study prehistory. People who study artifacts of prehistoric people, and bones of people and animals of prehistoric times.
artifacts	- objects that have been made by people--tools, cooking utensils, etc.
culture	- ideas, knowledge, beliefs, and systems of behavior of people.
cultural anthropology	- study of man's cultural evolution and of primitive and more advanced societies.
ethnographer	- a cultural anthropologist who studies living societies.
stratigraphy	- study of layers called strata, lying one above the other in which prehistoric remains are found. These layers are used for dating.
dendrochronology	- dating of prehistoric sites by use of tree-ring sequence.

---

[5] Bloom, _op_. _cit_., p. 64.

carbon 14 dating	- a method of determining the age of organic materials by measuring the rate of breakdown of carbon 14.

In the second behavioral aspect "Recall of specific facts" learners are expected to remember by recall or recognition those events, persons, places, sources of information,[6] etc., about the content being studied which will be necessary for forming the generalizations stated in the definition of the third knowledge objective defined below. For example, if the content is "Archaeologists and their work" then the complete statement of the objective is "Recall of specific facts about archaeologists and their work." For this objective the learners are expected to remember such specifics as kinds of artifacts archaeologists look for, kinds of clues they seek, how these clues are used, how an area is mapped, how records are kept, and how dates are determined. Another type of specifics learners are expected to remember are reliable sources of information about how archaeologists work. Some examples of important sources they are to remember are:

Baity, Elizabeth Chesley. Americans Before Columbus.

Baldwin, Gordon C. America's Buried Past.

Elting, Mary, and Folsom, Franklin. The Story of Archaeology in the Americas.

Marriott, Alice. The First Comers: Indians of America's Dawn.

Morris, Anne Axtell. Digging in the Southwest.

It should be kept in mind that the "main criterion for selecting specific facts is that they be a sufficiently adequate demonstration of the main idea to enable students to develop the desired generalization,"[7] or generalizations. Many of the specifics can be forgotten after generalizations are formulated. Since several sets of specific facts can be equally useful in developing the same generalization, the facts used may be selected according to materials available, specific characteristics of learners, interest of the teacher, and time available for the study.

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[6] Bloom, op. cit., p. 65.

As was previously stated, the content aspects from which specifics are to be selected are listed on the left hand side of Chart I. The specifics used are discussed in the references suggested for children to use in their research.

The last knowledge objective again emphasizes the remembering by recognition or recall, but this time generalizations are to be remembered. These generalizations are those abstractions which are of greatest value in explaining, describing, relating, and organizing the subject matter being studied.[8]

For this particular objective, "Knowledge of generalizations about archaeologists and their work," the learners are to remember these generalizations:

> Archaeologists are cultural anthropologists who seek to find out about early cultures by digging in the soil.
>
> Archaeologists use the things they find as clues for reconstructing how prehistoric people lived.

These generalizations will ultimately be absorbed in a higher level generalization which has the same general meaning as the first "Main

---

[7] Hilda Taba, Teachers' Handbook for Elementary Social Studies (Palo Alto: Addison-Wesley Publishing Company, 1967), p. 19.

[8] Bloom, *op. cit.*, p. 75.

Idea" listed on page 2.

Intellectual Ability and Skill Objectives

Behavioral aspects numbered 4, 5, 6, 7, 8, and 9 on Chart I are behavioral aspects for intellectual ability and skill objectives. In behavioral aspect 4 the learner is to develop "Ability to interpret and draw inferences from various types of data." If he is to do this he must have various kinds of communications to work with--books, magazines and newspaper articles, flat pictures, films, and filmstrips--and he must have practice in understanding the literal message contained in them.[9] In other words, he must first of all be able to change into his own words the meaning of the various parts of the communication, condense long parts of the communication into briefer more abstract terms and be able to rearrange the various parts of the communication in his own mind so as to get a total view of what it contains. Then he must relate what is in the communication to his own experience. To do this he has to recognize the essential from less essential or relatively irrelevant aspects of the communication and assess the relative emphasis to be given different elements of the relevant aspects.[10] As a further step he must be able to extend given tendencies or trends to determine implications, consequences and effects which are consistent with the conditions given in the communication and recognize that this extension is only an inference--not a certainty.[11]

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[9] Bloom, *op. cit.*, p. 89.

[10] Bloom, *op. cit.*, p. 93.

[11] Bloom, *op. cit.*, p. 95.

When a content aspect is added to this behavioral aspect, the total objective is stated. If the content aspect is "Archaeologists and their work," then the objective is "Ability to interpret and draw inferences from various types of data about archaeologists and their work." Adding the content aspect focuses the type of behavior defined above on specific content. Ability to interpret and draw inferences is dependent on previous knowledge, but it is also a necessary beginning for acquiring new knowledge.

"Ability to apply" means that: "Given a problem new to the student, he will apply the appropriate abstraction without having to be prompted as to which abstraction is correct and without having to be shown how to use it in that situation."[12] If the content aspect "Archaeologists and their work" is added to the behavioral aspect, the complete objective becomes "Ability to apply information about archaeologists and their work," and the information he is to apply is what has been delineated in the knowledge objectives discussed above.

The sixth behavioral aspect is "Ability to distinguish fact from opinion." It means the learner is to be able to break down communications into their constituent parts and detect the nature and use of them.[13] He must be able to tell which are statements of fact and which are statements of opinion and know why they are fact or opinion. Doing this involves knowing that factual statements are statements verifiable by impersonal means such as by seeing (There is a brick in the street), finding supporting evidence (Jack's bank statement showed a balance of two-hundred dollars), or determining concensus of authorities on the basis of data (There were people on the North American continent at least 10,000 years ago).

---

[12] Bloom, op. cit., p. 120.

[13] Bloom, op. cit., p. 144.

He must also know that an opinion is anything that cannot be verified by impersonal means. Opinions are (1) statements that tell how one person feels about something (It was a wonderful day), or (2) statements made about people (He is a kind man). It is important for children to remember that others can only have opinions (not facts) about people and what they do, since no one can get inside the skin of another person.

When the statement of the behavioral aspect is combined with the content aspect, then complete dimensions of the objective are given, and it is very evident what kind of communications are to be judged as fact or opinion. When the content being used for illustrative purposes is added to the behavioral aspect, the complete objective becomes: "Ability to distinguish fact from opinion in communications about archaeologists and their work."

The behavioral aspect "Skill in reporting using good organization of ideas and statements" refers to behavior best described as synthesis.[14] It involves combining parts of previous experiences with new material into a more or less well-integrated whole. That is, combining parts of previous experiences into a product not there before. In the combining process, the student must work within the limits set by the assignment, problem or other framework and must use the forms and conventions of the particular medium of expression being used. The nature of the audience to whom the learner is reporting is also an important factor in the type of reporting which is done.[15] When this behavioral aspect is combined with the content aspect used in previous examples, the complete statement of the objective becomes: "Skill in reporting on archaeologists and their work using good organization of ideas and statements."

---

[14] Bloom, op. cit., p. 162.

The eighth behavioral aspect is "Ability to form concepts and arrive at generalizations." This, too, involves combining parts of previous experiences with new material into a structure not there before. But the product to be arrived at in this objective is a set of abstract relations. To arrive at this product, the student begins with concrete data or phenomena. Using these data, he is expected "to study the phenomena, or facts based upon them, and then come up with a logically consistent scheme for classifying or organizing them. The scheme he uses should adequately account for the relations existing among the range of phenomena."[16] The complete objective, if the same content used in other objectives discussed above is used, would read "Ability to form concepts and arrive at generalizations about archaeologists and their work." Examples of generalizations to be developed with this content are those listed in the definition of objective three on page 13.

The behavioral aspect for the last intellectual ability and skill objective is "Ability to judge the relevancy for a particular use." This involves making judgments about the value of ideas, methods, or material for some purpose.[17] It functions as a step in other objectives where a judgment has to be made, as well as in its own right. Evaluations (or the making of judgments) are made with distinct criteria in mind.

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[15] Bloom, _op_. _cit_., pp. 163; 168-169.

[16] Bloom, _op_. _cit_., p. 171.

A statement of the complete objective when the behavioral aspect is combined with the content being used in these illustrations would be "Ability to judge the relevancy, for a particular use, of material about archaeologists and their work."

Value Objective

The third type of objective being emphasized is a value objective. Its behavioral aspect "Active interest in" has been defined as the learner doing something with or about what he is studying besides merely perceiving it. That is, he willingly, or voluntarily from choice, does something about it. He does not depend upon outside prompting.[18] Examples of overt behaviors which can be taken as evidence that this objective is being accomplished are:

> The learner spends more time than is required with the phenomena being studied. He turns to it when he has free time and may neglect other things for it.
>
> The learner explores aspects other than those required by assignments. He branches out from the original aspects.
>
> The learner selects particular areas from the "branching out" mentioned above and explores them deeply.

---

[17] Bloom, op. cit., p. 135.

[18] David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives (New York: David McKay Co., Inc., 1964), pp. 124-125.

> The exploration done by the learner increasingly makes use of more complex and more inclusive materials.*

If the content "Archaeologists and their work" is added to this behavioral aspect, the complete objective becomes "Active interest in archaeologists and their work." The overt behaviors suggested above then specifically become:

> The learner spends more time than is required reading accounts of, studying pictures, and asking questions about the work of archaeologists.
>
> The learner seeks out new material on the work of archaeologists. He reads accounts written by archaeologists which deal with many subjects.
>
> The learner selects and concentrates for extended periods of time on certain aspects of digging--how sites are selected, details of mapping a site, labeling findings from a site, etc.
>
> The learner increasingly moves from simple secondary accounts about his particular interest in archaeologists and their work to more comprehensive secondary accounts and primary accounts.

Learning Experiences

The "Main Ideas" listed on page 2 are the large generalizations around which this unit is organized. They provide criteria for selecting content and specifics as well as central points for looking at facts.

The detailed or specific content will be evident in each learning experience through the suggested questioning, reading, and researching activities as well as through the reference lists given. The learning experiences describe what the teacher may do to structure the learning experiences so the student will likely interact with the external conditions in his structured environment in such a way that the objectives for the unit will be realized. An indication of where the behavioral aspects of the objectives listed in Chart I are being developed is indicated by the numbers in parentheses following each learning experience.

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*These are examples of overt behavior the learner might demonstrate which give evidence that he is developing "an active interest" in the content being studied. Any overt behavior which is consistent with Krathwohl's definition could give evidence.

The learning experiences follow a rough order--initiation, development, and conclusion. The initiation activities are for the purpose of arousing interest, raising questions and issues requiring further exploration, and providing an approach from which to progress. The activities primarily concerned with the development of the various objectives stated in Chart I comprises the bulk of the unit. The conclusion is concerned with summarizing the various sections, building a bridge to the next section, or a combination of the two. The final conclusion is an attempt to pull together what has been found into statements approximating the "Main Ideas" listed on page 2.

While the learning experiences given in the unit are fairly detailed and planned so they may be followed as written, and in the order given, a teacher may use them in a more flexible way. She may, after reading what is suggested for a particular learning experience and what outcomes are expected, plan activities more suitable to her style of teaching and the needs of her students. An account of one teacher's first lesson given in Appendix A illustrates this.

Sequence of Learning Experiences

Section One

The content used for this section is that listed on Chart I (pp. 4, 7) under the headings "Anthropologists and Their Work," "Early Man in America," "Group Participation and Human Relations," and "Locating and Gathering Information."

The numbers in parentheses after each learning experience refer to the numbers of the behavioral aspects of objectives, listed in Chart I, the experience is designed to further.

Initiation

1. Prepare a bulletin board titled "Anthropologists at Work" with recent articles from newspapers and magazines dealing with archaeological activity on local and near local sites, as well as those more distant. If current articles are not available, copies of the articles in Appendix A may be used. (Public libraries often have collections of clippings and pictures on anthropology for loan.)

Start an exhibit of realia from archaeological sites. This might include fire rocks, shells, boiling stones, and other artifacts. If realia of this type are not available, collect pictures of such artifacts which have been excavated.

At the first class meeting call attention to the bulletin board and tell more about the sites described in the articles which are displayed. Identify the objects in the exhibit, tell where they came from and their relation to the unit which is being introduced.

2. If possible, show the film "Ancient Earth."* Write the following questions on the chalkboard and ask students to search for answers as they view the film:

What is the meaning of the word anthropology?
Who are anthropologists?
What is meant by the term culture?

After children have discussed the film in a general way, ask for an answer to the first question. Record what is given under the question. Follow the same procedure with the other questions. Emphasize that these are only partial answers based on what was found from just one source of information.

Pass out copies of the article "Anthropologists" (see Appendix A) and ask students to search for answers to the same questions as they read.

After all have finished reading, ask for additional information to add to the answers of the questions. If children start parroting back the exact words of the article, explain that what is read has real meaning only when it is said (translated) in one's own words. If necessary, take time to help them develop this skill. For example, ask for other words that tell what "study" "human beings" "adapt" "environment" etc. mean in the first sentence of the article they just read. Then ask them to tell in their own words what the sentence says.

After all pertinent information has been added to that on the chalkboard, ask for a definition of anthropology, anthropologists and culture in light of all now known. When satisfactory definitions have been formulated, introduce a large book made of chart sized paper with a page for each letter of the alphabet and a plywood cover with the title Big Book of Terms. Explain that it is a book for recording new terms met in their study.

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*Particular A-V materials are suggested from time to time as part of learning experiences. Others are listed on page 100. Teachers should preview all of these materials and use them when they will best enhance children's learning.

Ask for other words from the article just read that should be included. Write these on the board, discuss their suitability, work out definitions, decide how these definitions will be arranged in the book and who will write them. In deciding on a recorder, or recorders, time should be taken to talk about the kind of person needed and the importance of selecting someone who will meet these qualifications.

"Vocabulary and Terms of People Who Study the Past" in Appendix A gives a suggested list for the teacher's use.

(1) (2) (4) (9) (10)

Development

3. Collect as many as possible of the children's books listed in the Bibliography on page 75. Get several copies of each if possible. From the total list select a shelf of books including the ones in the reference list given below and any others which are not on the list but are pertinent to finding out about archaeologists and their work.* Give each child a copy of the reference list and either assign him a definite book to read or ask him to read as many

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*The reference lists in this unit may be divided into three smaller lists if needed: a list for the most immature readers, a list for average readers, and a list for mature readers.

as needed to find answers to these questions:

Who are archaeologists?
What evidence do they seek?
Why do they want this evidence?
How do they get it?

Before the children start their research, remind them to keep a list of words which should be considered for the Big Book of Terms. Work with them to set up standards similar to the following example for taking care of themselves.

When Doing Research

Go quietly to and from the book shelves.
Use what you know about selecting a book for your purpose.
Take the book to your seat to read.
When you have finished with the book, return it to the shelf and select another.
If you need to talk to your neighbor, speak in a low, soft voice.

Make a chart of these standards and hang it so it can be seen by all children.

During the research period be available to help those who have selected books too difficult or who need help in interpreting difficult passages. At the end of the research period talk with children about what was accomplished, what needs to be done the next research period, and how well they took care of themselves.

Continue with the research until children begin to report they are finding little new information. Then call the group together and discuss each question. Start the discussion by asking children who are immature readers, or who usually have little to say, to respond first. Giving the stronger students later turns will bring more children into the discussion. As a summary pass out a copy of

"Archaeologists and How They Work" (Appendix A) to each child. By directed silent reading extend and further clarify answers to the four questions listed above. Close the period by helping children evaluate their conduct against the standards which they formulated.

References on Persons Who Study the Past*

"Anthropologists." (Appendix A)

"Archaeologists and How They Work." (Appendix A)

"Archaeological Field Trip to Mayne Island." (Appendix A)

Baity, Elizabeth Chesley. *Americans Before Columbus*, pp. 59-100.

Baldwin, Gordon C. *The Ancient Ones*. Use index.

Baldwin, Gordon C. *America's Buried Past*, pp. 20-153; 154-156; 162-164.

Benjamin, Nora. *The First Book of Archaeology*.

Bond, Guy L.; Clymer, Naomi Chase; and Cooke, Dorothy E. *Deeds of Men*, pp. 353-401.

Burland, Cottie. *North American Indian Mythology*, pp. 8-9.

Elting, Mary, and Folsom, Franklin. *The Story of Archaeology in the Americas*, pp. 8-138.

Hibben, Frank C. *Treasure in the Dust*.

Holling, Holling C. *The Book of Indians*, p. 13.

James, Harry C. *The First Americans*, pp. 21-45.

Johanson, Donald C., and Edey, Maitland A. *Lucy, the Beginning of Human Kind*.

"Junior Editors Quiz on Arrowheads." (Appendix A)

Kidd, Keneth E. *Canadians of Long Ago; The Story of the Canadian Indian*, pp. 2-10.

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*The *World Book* and/or other available encyclopedias and appropriate reference books should be added to each reference list.

LaFarge, Oliver. The American Indian, pp. 8-12.

Leavitt, Jerome E. America and Its Indians, pp. 13-16.

Leechman, Douglas. Native Tribes of Canada, pp. 5-13.

"Major Divisions of North American Indians." (Appendix A)

Marriott, Alice. The First Comers: Indians of America's Dawn, pp. 2-20.

"Mesa Verde." (Appendix A)

Morris, Ann Axtell. Digging in the Southwest. Use index.

Nussbaum, Derek. Derek in Mesa Verde.

Scheele, William E. The Earliest Americans, pp. 7-18.

"Serpent Mound." (Appendix A)

Silverberg, Robert. Home of the Red Man: Indian North America Before Columbus, pp. 17-52.

Stirling, Matthew W. Indians of the Americas, pp. 102-104.

Tunis, Edwin. Indians, pp. 15-19.

White, Anne Terry. All About Archaeology. Use index.

White, Anne Terry. Pre-historic America. Use index.

(1) (2) (4) (7) (9) (10)

4. Give each child a copy of "Archaeological Field Trip to Mayne Island" (Appendix A) to read. Follow the reading with a group discussion based on these questions:

Locate British Columbia; Vancouver, B.C.; Tsawassen, B.C.; the Straits of Georgia; the Gulf Islands; and Mayne Island on a map of Canada.
What did the author mean when she said the site was a midden?
Describe how the site had been mapped out. What would be the width in feet, or feet and/or inches of each rectangular plot?
What tools were used in the excavation? Describe how each rectangle was stripped and explain why this process was used.

What had to be done before any artifact could be picked up? Why was this important?
What happened to the soil taken from the rectangle? Why was this done?
What happened to the artifacts after they were taken to the tent down near the beach? Why was this done?
Describe how the walls of the excavation looked?
Describe the burials found.
What is a hearth? Describe the one found at this site.
How did Dr. Carlson and other archaeologists find digging sites?
Can anyone who desires open a digging site in British Columbia? Explain your answer.
What happens to a site after archaeologists have finished digging?

Show the film "Point of Pines" which presents archaeology students digging in a Pueblo ruin, and ask students to be ready to compare the procedure used by these archaeology students with that used at Mayne Island. Take plenty of time for this comparison and for clearing up questions and misconceptions.

Close this learning experience by showing and discussing the film "Glimpses of the Past" which explains how archaeologists put together the story of the past.

(1) (4) (5) (7) (10)

5. Have each child select one of the following topics related to archaeologists and their work and from the reference material available gather information and write a report.

Topics for Written Reports

Pueblos in Chaco Canyon
Mesa Verde
A. E. Douglas and His Tree Calendar
Carbon 14 Dating
Folsom Points
Clovis Points
Gyprum Cave in Nevada
Sandia Cave in New Mexico

The Hopewell Culture
The Serpent Mound of Ohio
Camelops
Oraibi Village

Before children start their research, discuss what makes a good written report. List the criteria formulated on the chalkboard. They could look something like this:

To Write a Good Report

Choose a subject in which you are interested.
Be sure there is much information about the subject.
Read all you can find about the subject.
Make a topical outline based on your research.
Choose an interesting introduction.
Make every sentence in the report tell something about the subject.
Tell things in a planned order.
Write a good ending.

Teach, or reteach, as needed, knowledge about locating information. Include the following:

Using titles of books as a guide to their content
Table of Contents
Index
Title page
Copyright date
Glossary
Appendix
Map lists
Illustration lists
Key words, letters on volumes, index and cross references in use of encyclopedias

To help children keep a list of references read for their reports, give each child six or seven three by five index cards. Explain that on each card they are to put the author's name, the name of the book read, the address of the publisher, the date the book was published, and the pages read about the topic being researched. Teach a correct bibliographical form such as in the illustration.

> Marriott, Alice. The First Comers: Indians of
> America's Dawn. New York: David McKay Co.,
> Inc., 1960.
>
> Methods used by archaeologists in studying artifacts of prehistoric people. (Pp. 2-4)

If children become concerned about forgetting important facts, provide a period for special help in note taking.

Select a page from a social studies text and give a purpose for reading it. Teach children to skim the page and select the part that gives needed information. After checking to be sure all children have found the correct information, ask them to read the selection again, pick out the important points given and think of words, phrases, or short sentences which will help them recall what was read. Record these reminders on the chalkboard. Point out the variety in the suggestions given and help children see the strengths and weaknesses of each.

Assign a new selection and have children pick out the essential points and think of brief reminders. Check these. In showing children where and how to write them on the index cards stress that anything copied must give credit to the author, be enclosed in quotation marks and put on a separate card with the name of the author, the name of the book, and the page(s) where it was found. The amount of time devoted to each of these steps will be determined by the needs of the group.

Be available during the research periods to help children apply what has been taught. At the end of each period help them evaluate what has been accomplished, what needs to be done next, and how well they took care of themselves.

As each child finishes his research, ask him to make a topical outline of what should be included in his report. Have a group lesson on "topical outlines" if it is a new concept.

When the outline is completed, give each child as many sheets of paper as he has topics in his outline and ask him to write one topic of his outline at the top of each sheet of paper. Next have him select one of these sheets and write on it what he knows about the topic written at the top of the page. Then select another, and continue until he has written on all the topics of his outline.

When this is finished, explain that what has been written on each sheet of paper will be one paragraph in the report, so the next steps are to decide on the arrangement of the paragraphs, and write an introductory and a closing paragraph.

Provide time to read each child's report aloud with him so any changes necessary for it to say exactly what was intended can be made. This will include such things as rewriting some sentences, adding and/or deleting others, and cleaning up the mechanics of English.

When all reports are finished, provide a time for sharing them with the class. Encourage questions and comments after all the reports on one topic have been read.

Evaluate reports against criteria established earlier and then give each child a piece of nice paper to make a clean copy for accompanying a time line.

(2) (4) (6) (7) (9) (10)

6. Introduce the concept of time line, if children are unfamiliar with it. Explain that a time line shows time relationship, that is the dates certain events, such as the events which were the subjects of the reports, happened. Emphasize that a time line is drawn to scale and divided into equal segments, each representing the same length of time. Events are then placed on the line at the exact time they happened if the date is known, or in the proper interval if the exact date is unknown. They may be illustrated with drawings or pictures and explained with written accounts such as the reports written earlier.

Divide the class into committees according to the topic of the report written in the previous learning experience and after deciding as a total group on the scale to be used and the form the time line is to take, assign each committee one segment to make and illustrate. Lead a discussion on organization of committee work, responsibility and conduct, and help children set up criteria which committees may use as standards for group behavior. They might include the following:

A Good Committee Chairman

Has the problem clearly in mind and is sure all members understand it.
Encourages free discussion and participation by all members.
Accepts all ideas and ask members for an evaluation of all concrete suggestions made.

Summarizes plans agreed upon.
Follows through with the tasks accepted and reports results to the class.

A Good Committee Member

Accepts his fair share of the work of the committee.
Contributes to committee plans.
Carries out assigned and accepted tasks punctually.
Accepts wishes of the majority.

Make these into permanent charts and hang them where all children can see and use them. After each work period help children assess their progress, how well they worked in committees, and next steps.

When each section of the time line has been completed, assemble it and with the children evaluate it for accuracy and attractiveness.

(2) (4) (9) (10)

7. Ask children for words which they think should be added to the Big Book of Terms. Write them on the board, decide on those to include, define them, and either select a new recorder or ask the one chosen earlier to record them in the book.

(1) (4) (9) (10)

8. Present the following problem to the class:

Suppose you are an archaeologist in the year 5010 and you want to find out about the people who lived in the place we now call Kansas City, Missouri.

As an archaeologist where would you find your data?
What kind of evidence would you seek?
How would you select a possible place to get these data?
What preparation would you need to make once you had decided upon a possible site?
What would you do with the artifacts you found?
How would you record your findings?

How would you store your data?
How would you determine the age of your findings and when events occurred?

If children have trouble with any of these questions, help them in applying what they know by the following question sequence:

What do you know that might help answer this question?
What would happen if you used this?
Why would it happen?
Would this help with the question you are trying to answer? Explain.

(2) (4) (5)

9. Summarize on the chalkboard the work of archaeologists. Use the following chart form for this summary.

Work of Archaeologists

Questions they start with	
Answers they seek	
Methods they use to get their data	
How they organize what they find	

Suggested question sequence to help children fill in the chart:

Remembering what you know about cultural and physical anthropologists and that archaeologists are cultural anthropologists, what questions might archaeologists ask themselves as they studied artifacts found in a prehistoric excavation?

Keep probing until questions similar to the following are given and written on the board:

How old are these artifacts?

What do these artifacts suggest about: the food of these people, if it was cooked or eaten raw, how it was served, how fire was used; the kind of clothing and adornments worn, from what they were made, where the materials were secured; the kind of shelters they had, the materials used, tools used; rituals and religious ceremonies held, etc?

Are these artifacts similar to those found by other archaeologists?

What new evidence or strengthening of old evidence do these artifacts provide?

How can all of this be said in a short way?

Work with children until a statement similar to the following is made: Archaeologists ask questions about the artifacts found which will give clues about the ideas, beliefs, and behavior of people who lived at that time.

Fill in the first large space on the right side of the chart with the questions asked and the generalization made.

Continue with the following question:

Keeping in mind the kind of questions archaelogists ask, what would you say about the kind of answers they seek?

If children cannot immediately infer answers to this question, probe with clue questions until they arrive at a statement something like this: Archaeologists seek to find answers about the way prehistoric people adapted to their environment--they seek to find out about the culture of people who lived in a particular place at a particular prehistoric time.

Fill in the second large space on the right hand side of the chart with the generalization about the answers archaeologists seek.

In a similar way help children make statements about methods archaeologists use to obtain data and how they organize their findings.

Explain that the generalizations they have discovered and others they will find will be used a great deal and that one way to keep them in mind is to put them on a chart. Then show them a large sheet of chart paper with the title Generalizations Developed from Our Research.

Suggest that a generalization about what anthropologists are seeking to understand would be an appropriate one to put first. After it has been formulated, go over the Work of Archaeologists chalkboard chart and either find generalizations in the right hand column that summarize the information required by the left hand columns or use what is in the right hand columns to arrive at such generalizations.*

Discuss with the class the kind of persons who should have the responsibility of writing the generalizations on the chart and have the group choose such a committee.

(1) (2) (3) (4) (5) (7) (8) (9) (10)

10. Explain that one question which archaeologists and others who study prehistoric cultures have been concerned with is the origin of American Indians and how they got to America. Explain also, that readers of these accounts need to keep in mind the difference between "fact" and "opinion" if they are to determine why some conclusions are considered factual and others are still based on insufficient evidence to be classed in that way.

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*When children are asked to make generalizations from the findings of their research, the teacher should keep in mind the "Main Ideas" listed on page 2 so she can guide children in selecting data for developing generalizations that will later contribute to summary statements which have the same basic meanings as these "Main Ideas."

Teach children the meaning of the words "fact" and "opinion." Note the meaning for these terms in the definition of Behavioral Aspect 6 on page 15. After working with many examples, give children a list of fact and opinion statements and ask them to put O before each opinion statement and F before each factual statement. Go over the papers and clear up any problems children are having.

Select a passage from a social studies text or other appropriate source and ask each child to pick out an opinion statement and a factual statement and give reasons for the choice.

Continue with similar practice as long as needed.

(1) (2) (4) (6)

11. Review the procedure for locating information and taking notes. Ask children to read as many of the following references as possible, in the time provided, to find what archaeologists have concluded about the origin of American Indians and how they got to America.

References on Origin of American Indians and
How They Got to America

Baity, Elizabeth Chesley. Americans Before Columbus, p. 53.

Baldwin, Gordon C. America's Buried Past, pp. 20-21.

Bowden, A. O., et al. The Day Before Yesterday in America, pp. 11-18.

Burland, Cottie. North American Indian Mythology, pp. 8-9.

Drucker, Philip. Cultures of the North Pacific Coast, pp. 1-8.

Elting, Mary, and Folsom, Franklin. The Story of Archaeology in the Americas, pp. 111-113; 123.

Embree, Edwin R. Indians of the Americas, pp. 14-18.

Gridley, Marion E. Indians of Yesterday, p. 7.

Holling, Holling C. The Book of Indians, p. 13.

Hunt, W. Ben. The Golden Book of Indian Crafts and Lore, pp. 8-9.

James, Harry C. The First Americans, pp. 1-17.

Josephy, Alvin M. Jr. The American Heritage Book of Indians. "From Asia to America," p. 25.

Kidd, Kenneth E. Canadians of Long Ago: The Story of Canadian Indians, pp. 2-5.

LaFarge, Oliver. The American Indian, pp. 8-9.

Leavitt, Jerome E. America and Its Indians, chapter I.

Leechman, Douglas. Native Tribes of Canada, pp. 4-12.

Marriott, Alice. The First Comers: Indians of America's Dawn, pp. 11-15.

May, Julian. They Lived in the Ice Age.

McNeer, May, and Ward, Lynd. The American Indian Story, p. 5.

Parker, Arthur C. The Indian How Book, pp. 323-327.

Payne, Elizabeth. Meet the North American Indians, p. 4.

Scheele, William E. The Earliest Americans, p. 7.

Silverberg, Robert. Home of the Red Man: Indian North America Before Columbus, pp. 17-23.

Stirling, Matthew W. Indians of the Americas, p. 17.

Tunis, Edwin. Indians, pp. 15-16.

Underhill, Ruth. Indians of the Pacific Northwest. Use Table of Contents.

Washburn, Wilcomb E. The Indian in America, p. 1.

Wherry, Joseph H. The Totem Pole Indians, pp. 7, 11.

12. Have a teacher led group discussion on children's findings from their research. Starting with immature readers and continuing to the most mature, ask this sequence of questions:

What did you find about the believed origin of Indians and how they came to America?
What evidence was given?
How adequate is the evidence?
What can be concluded?

Close the discussion with a statement which summarizes what archaeologists have concluded. Add this statement to the Generalizations Developed from Our Research chart.

(2) (4) (6) (8) (9) (10)

Conclusion

Conclude this section by giving each child a copy of "Major Divisions of North American Indians" (see Appendix A) and explain that when the white man came to North America the country was occupied by many Indian tribes who spoke different languages and who had different cultures determined by the land and climate in which they lived.

After children have read the hand-out, discussed and related what it said to maps of the United States and North America, identify the cultural areas to which the Northwest Pacific Coast Indians and the Hopi Indians belonged and explain that since we will study these two groups of Indians the physical characteristics of these areas are important for understanding their cultures and will be studied next.

(2) (4) (10)

Section Two

The content used for this section is that listed on Chart I (pp. 4-8) under "Natural Vegetation and Resources" of the "Hopi Indians," "Northwest Pacific Coast Indians," and "Midwest USA," "Group Participation and Human Relations," and "Locating and Gathering Information."

Initiation

1. Using as many as possible of the books given in the reference list below, other appropriate books available on Hopi and Northwest Pacific Coast Indians, geography and social studies texts, encyclopedias, and other books on climate, terrain, vegetation, and animal life of the three areas being studied, arrange a browsing corner in the classroom. Give children an opportunity to become acquainted with it and the new books available and to share interesting things found with their friends.

If possible take children to a library and review (or introduce if necessary) the use of the card catalogue and the section of the library where reference books, Indian books and social studies books are shelved.

(2) (10)

Development

2. To facilitate the gathering of information about the physical characteristics of the Northwest Pacific Coast, the Southwest Desert, and Midwest USA (or the area in which children who are using this unit live) divide the class into three groups and designate one

group to study each area. These groups will not function as committees--they are research groups.

Review what has been taught about locating and gathering information with special emphasis on the use of index cards for note taking, differentiating between fact and opinion, and determining probable validity of information by noting the qualifications of the authors.

Remind children to keep a list of new terms with their meaning for the _Big Book of Terms_.

Give each child a copy of _References on Terrain, Climate, Vegetation and Animal Life_ and review with them the standards which were developed for taking care of themselves while doing research.

During the research period be available to help those having problems in selecting books, locating information, or taking notes and at the same time be alert to group problems which arise.

At the end of each research period help the children evaluate their progress in finding information sought and their behavior in taking care of themselves.

References on Terrain, Climate,
Vegetation and Animal Life*

Ault, Phil. _This is the Desert_. Use index.

Baity, Elizabeth Chesley. _Americans Before Columbus_, pp. 96-99; 148.

Bowden, A. O.; de Porter, Carmen Gonzales; Cutright, Prudence; and Charters, W. W. _The Day Before Yesterday in America_, pp. 44-52.

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*Classroom geography and social studies texts as well as encyclopedias, and other available relevant books should be added to this list.

Burland, Cottie. *North American Indian Mythology*, pp. 29-30.

Cadbury, B. Bartram; Collins, Stephen; Lemmon, Robert S.; Klots, Alexander B.; Klots, Elsie; and Ress, Etta Schneider. *The Community of Living Things in Forest and Woodland*. Use index.

Curtis, Edward S. *The North American Indian*, Vol. XII, p. 5.

Drucker, Philip. *Indians of the Northwest Coast*, pp. 1-9.

"Geography of the Southwest USA" (Appendix B).

Glubok, Shirley. *The Art of the North American Indian*. Use index.

Hawthorn, Audrey. *Art of the Kwakiutl Indians, and other Northwest Coast Tribes*. Use index.

Hawthorn, Audrey. *People of the Potlatch*, pp. 7; 10; 15-16; 27-41.

Hofsinde, Robert. *Indian Hunting*, pp. 31-80.

Holling, Holling C. *The Book of Indians*, pp. 15-77; 97-103.

Houston, James. *Eagle Mask: A West Coast Indian Tale*, pp. 26-32; 38-47.

Kidd, Kenneth E. *Canadians of Long Ago: The Story of Canadian Indians*, pp. 13-31.

Kirk, Ruth. *David, Young Chief of the Quilentes*, pp. 7-14; 29-40.

Klots, Alexander B., and Klots, Elsie B. *The Community of Living Things in the Desert*. Use index.

Knight, David C. *The First Book of Deserts*. Use index.

La Farge, Oliver. *The American Indian*, pp. 87-88; 162-172.

Leavitt, Jerome E. *America and Its Indians*, pp. 23-24.

Leechman, Douglas. *Native Tribes of Canada*, pp. 276-299.

Lisitzky, Gene. *Four Ways of Being Human*, pp. 211-214; 240-247.

Lovell, Josephine. *Watlala--An Indian of the Northwest*, pp. 2-3; 4-7.

McFeat, Tom. *Indians of the North Pacific Coast*, pp. 1-5.

McNeer, M. Y. *The Story of the Southwest*. (Pages are not numbered.)

Payne, Elizabeth. Meet the North American Indians, pp. 10-16; 23-20.

"Physical Features and Resources of the Northwest Pacific Coast." (Appendix B)

"Salmon." (Appendix B)

"Shelled Animals: Insight to Ice Age." (Appendix B)

Stirling, Matthew W. Indians of the Americas, pp. 138-139.

Tunis, Edwin. Indians, pp. 117-126.

Underhill, Ruth. Indians of the Pacific Northwest. Use the Table of Contents.

Uprichard, Muriel. Three Little Indians, p. 4.

"Whaling" (Appendix B)

Worthylake, Mary M. Moolack: Young Salmon Fisherman, pp. 5-24.

Zim, Herbert S., and Dodge, Natt N. The Pacific Northwest.

Zim, Herbert S. The Southwest.

(2) (4) (5)

3. After the groups have finished their research, ask the students to think of ways to organize their information so the three areas can be easily compared. An example of one way would be to make a bulletin board into a large chart similar to the following:

Physical Characteristics of Three Areas

Area	Terrain	Climate	Vegetation	Animals
Midwest				
Northwest Coast				
Southwest Desert Area				

In the discussion which accompanies making the bulletin board (or other plan decided upon for organizing the material), use maps freely so children connect information with the map presentation. Start with one topic such as Terrain of the Southwest Desert area. Ask the children who studied this area to tell what they found. (Always start with children who will likely have the least to say so all can make a contribution.) As characteristics are given, write them on the chalkboard. When all have been given, use them as a basis for writing a group description of the Terrain of the Southwest Desert Area.

A procedure such as the following may be used: As a group decide what should be in the introduction, development, and ending and make a topical outline on the board. Ask for a beginning paragraph. As it is given write it on the board and then change, add, and delete until the group is satisfied they have said what needs to be said.

Continue in a similar way with the main body of the description (development) and the ending. When the complete description has been composed, proofread it for English mechanics and have the group choose one child to make a copy on nice paper for its slot on the bulletin board.

Follow the same procedure for writing descriptions of the Northwest Pacific Coast Terrain and Midwest Terrain.

For the descriptions of Climate, Vegetation, and Animals divide the class into three groups--one to study and report on Climate of the three areas, one on Vegetation of the three areas and one on Animals of the three areas. Have the information from each group's research given and the findings written on the board (or chart paper) as was done for Terrain. When all findings are on the board (or chart paper), divide the group who researched Climate into three smaller groups--one for writing a description about Climate of the Northwest Pacific Coast, one about Climate of the Southwest Desert Area and one about Climate of the Midwest using the material that was put on the board (or chart paper). Use the same type of organization for the group which studied Vegetation and for the one which researched Animals.

As each small group finishes its description, read aloud with the group what has been written and make any changes and corrections needed. Then have the group choose one capable person (who has not been chosen before for a special task) to make a copy for the bulletin board.

When all accounts have been finished choose a committee (of students who have not previously been selected for a special task) to think of and make an attractive caption and arrange the accounts into an effective bulletin board chart (or other device agreed upon by the class).

(2) (4) (5) (6) (7) (9) (10)

4. Using the chart (or other organizing device selected by the class) compare and contrast the three areas according to Terrain, Climate, Vegetation and Animals.

A question sequence about Terrain might be:

Look at the column titled Terrain. Do you find any similarities or differences in the terrain of these three areas?
What relationship do you find between the different characteristics of an area? For example, is there a relationship between the altitude of an area and the land formations? Between the plants and animals and the terrain?
Say what you have discovered in a short way.

An illustration of three statements said in a short way that students might discover could be:

The overall elevation, type of soil, waterways, and other characteristics of terrain differ in the three areas studied.
Extremely high altitudes often have rough terrains. Many of the plants and animals frequenting an area differ in the various terrains.

Using the same general procedure help children arrive at generalizations about Climate, Vegetation, and Animals of the three areas. Also help them make any generalizations warranted about the relation between climate and vegetation, vegetation and animals, etc. Add these generalizations to the chart titled Generalizations Developed from Our Research.

Identify and define any new terms and add them to the Big Book of Terms. "Vocabulary and Terms of Terrain, Climate, Vegetation and Animal Life" in Appendix B give a suggested list for the teacher's use.

Conclusion

5. This section may be concluded by relating it to the next section by saying something similar to the following:

Hundreds of years ago this Southwest Desert Area we have been studying was the center of an Indian culture more advanced than any other that existed north of Mexico. It was the home of the Peaceful People--the Hopi Indians. They were farmers who grew most of their food and built homes so well that they are still standing.

The Hopis lived peacefully together each one knowing his own duties and doing them, and respecting the duties of others. Good Hopis were calm, self-possessed, and soft spoken. Responsibility and cooperation, not only in their contacts with others, but with the animals and plants, water and soil, and everything that had any importance in their lives was their highest ideal. They had the nearest thing to what we now call civilization among the hundreds of Indian tribes that lived north of Mexico. Their culture still persists in the Southwest Desert Area.

Also, many years ago Indian tribes different in physical characteristics but similar in culture lived in small villages along the rugged, indented, Northwest Pacific Coast of North America. Slowly each tribe added to its own arts and industries, customs and beliefs from other tribes until there was one uniform, rich, unique, culture. Usually prehistoric people who developed agriculture to the extent that the Hopis had, and consequently did not have to depend on hunting and gathering for their food, were the ones who had the highest standards of living. The culture of the Northwest Pacific Coast Indians was an exception. These people were dependent on natural products for their living and so were considered hunters and gatherers, but because of the wealth of natural products in their area--especially from the sea--they were able to develop a rich culture without agriculture. In other words, they had a hunting and gathering type culture as rich as any agricultural culture.

Only fragments of this culture remain. Many of the Indians living on the coast today are commercial fisherman and loggers. Men no longer have time to carve and paint and their ancient art style, except for a few relics of ancient patterns that have been deliberately preserved, has almost disappeared. Some groups still occasionally give festivals and feasts in the old tradition and some still cling to the clan organization. Most, however, hold membership in a Christian church.

Next we will find out about these early cultures. We will be able to do this because of the painstaking work of physical anthropologists, cultural anthropologists such as archaeologists and ethnographers, early historians, geologists, palaeontologists, and others who study the past.

(4) (10)

Section Three

The content used in this section is that listed on Chart I (pp. 4-8) under "Social Organization," "Homes," "Villages," "Work," "Games and Sports," "Food," "Dress of Men, Women and Children," "Religious Beliefs and Practices," "Myths," and "Art Forms," of the "Hopi Indians," "Northwest Pacific Coast Indians," and "Midwest USA"; "Societies, Dances, Ceremonies, Road of Life," of the "Hopi Indians"; "Societies, Dances, Ceremonies, Cycle of Life," of the "Northwest Pacific Coast Indians"; and "Societies and Ceremonies," of "Midwest USA"; "Group Participation and Human Relations"; and "Locating and Gathering Information."

Initiation

1. As a background and point of reference for studying the social organization in the culture of the Indians of the Northwest Pacific Coast and the Hopi Indians of the Southwest, present-day, non-Indian families living in Midwest USA will be considered first.

Present a question such as, "Who are the people who live in your house or apartment?" Put responses on the chalkboard or chart paper. Continue with the listing until several categories are represented. Then ask questions such as the following and list answers given after each one:

> Which of these people belong together?
> What is your reason for saying they belong together?
> What names would you give each of these groups? (Groups or categories will likely be parents, brothers, sisters, grandparents, etc.)

Encourage children to talk about the categories they have suggested and relationships among them.

(1) (2) (8) (10)

2. Explain that one way of showing the relationship among the groups they have suggested is by a family tree. Give each child a copy of "Diagram of Nucleated Family Tree" (Appendix C) to follow during the explanation.

Give children an opportunity to make a family tree of the people who live together in their home as a family. Encourage those who desire to enlarge their family tree to include other relatives. Give copies of the diagrams "My Family Tree" and "Diagram of Extended Family Tree" (Appendix C) to each child to use as a guide. (Use discretion in this activity. If any child will be embarrassed, use a generalized family tree.) Ask children to study the generalized family tree or the individual family trees for consistent patterns.

If individual family trees are used, divide the children into groups of four or five and let them study the family trees made by their members. Use the following sequence of questions or a similar one to guide the study:

> What differences do you notice in these family trees?
> Why are there these differences?
> How are the family trees alike?
> What people most commonly live together?

For study of a generalized family tree use these questions:

> What groups of people are represented in this family tree?
> Do you know of any families who have these groups?
> What groups of people live together in the families you know?

Write on the board what children conclude in answer to the question, What people most commonly live together? It could be a statement something like this--The people who most commonly live together in the families we know are the father, mother, and their children, or the mother and the children.

After explaining that sociologists and anthropologists call a family where the parents, or a parent, and unmarried children live together in a small separate household a nucleated family, ask the children to restate the generalization so that the term nucleated family is included. Work for a statement such as: The families in Midwest USA that we know are nucleated families.

This generalization may be added to the chart Generalizations Developed from Our Research.

(1) (2) (3) (4) (7) (8) (9) (10)

3. Give each child a copy of "Junior Editors Quiz on Relatives" (Appendix C). After children have read and talked about it, make a list of kinship terms they use in talking about their families. Terms selected and defined should be added to the Big Book of Terms. "Vocabulary and Terms of Family Structure and Social Organization" in Appendix C gives a suggested list for the teacher's use.

(1)

Development

4. Organize the class into two groups. One group to have responsibility for gathering information about the social organization of the Northwest Pacific Coast Indians (the structure of their society, potlatches, marriage customs, burial customs). The second to study

the society structure, marriage customs and burial customs of the Hopi Indians.

Have as many of the books given in the reference list on pages 51-53 of the unit as possible. Supplement it with encyclopedias and other books in the local libraries on the culture of these Indians. Review research procedures previously emphasized and what was taught about fact and opinion. Put emphasis on index titles helpful in gathering this information: ancestral family, clans, courtship, descent, extended families, house chief, inheritance, intermarriage, kinship, lineages, marriage, maternal side, matrilineal, names, paternal side, patrilineal, moieties, rank, social organization, social position, society, tribe, phratries, potlatches, slaves, etc.

If necessary review note taking. A list of available references should be given to children but the page numbers should be omitted. If they need additional help, devote one period to use of the index in locating information. (Pages given on the reference list below are for the teacher's use.)

References on the Social Organization of the Northwest Pacific Coast and Hopi Indians

Baity, Elizabeth Chesley. Americans Before Columbus, pp. 102-149.

Bowden, A. O., et al. The Day Before Yesterday in America, pp. 52-53.

Brindze, Ruth. The Story of the Totem Pole, pp. 17-28.

Burland, Cottie. North American Indian Mythology, p. 132.

Curtis, Edward S. The North American Indian. Use index.

"Diagrams of Family Trees." (Appendix C)

Drucker, Philip. *Indians of the Northwest Coast*, pp. 107-147.

Gridley, Marion E. *Indians of Yesterday*, pp. 61-62.

Harris, Christie. *Once Upon a Totem*, Preface viii-ix; p. 113.

Harris, Christie. *Raven's Cry*.

Hawthorn, Audrey. *People of the Potlatch*, pp. 20-25.

Jenness, Diamond. *The Indians of Canada*. Use index.

Josephy, Alvin M., Jr. *American Heritage Book of Indians*, pp. 298-299.

"Junior Editors Quiz on Relatives." (Appendix C)

Kidd, Kenneth E. *Canadians of Long Ago: The Story of Canadian Indians*, pp. 31-36.

"Kinship and Social Structure of the Northwest Pacific Coast Indians." (Appendix C)

"Kinship and Social Structure of the Southwest Hopi Indians." (Appendix C)

LaFarge, Oliver. *The American Indian*, pp. 95-98; 176-177.

Leavitt, Jerome E. *America and Its Indians*, p. 108.

Leechman, Douglas. *Native Tribes of Canada*, pp. 301-305; 309-311.

Lisitzky, Gene. *Four Ways of Being Human*, pp. 247-254; 280-282.

Lovell, Josephine. *Watlala--an Indian of the Northwest*, p. 4.

McNeer, May, and Ward, Lynd. *The American Indian Story*. Use index.

"Pronunciation Guide for Indian Words." (Appendix C)

Provincial Archives. *British Columbia Heritage Series--Our Native Peoples*, Series I: Vols. 1, 2, 4, 5, 6, 7, 10.

Silverberg, Robert. *Home of the Red Man: Indian North America Before Columbus*, pp. 181-183; 212-220.

Stirling, Matthew W. *Indians of the Americas*, pp. 142-147.

Tunis, Edwin. *Indians*, pp. 125-127; 136; 151-153.

Underhill, Ruth. First Came the Family. Use index.

Underhill, Ruth Murray. Indians of the Pacific Northwest. Use index.

Underhill, Ruth Murray. Beaverbird: A Story of Indians on the Coast of Washington before the Coming of the White Man. Use index.

Vlahos, Olivia. New World Beginnings. Use index.

Wherry, Joseph H. The Totem Pole Indians, pp. 34-36.

During each research period be alert to the use children are making of knowledge acquired earlier on locating information and taking care of themselves. If a number of children have difficulty, time should be set aside for reteaching or reviewing.

(1) (2) (4) (5) (9)

5. When children have finished their research on social organization, call the group together and ask the question: What did you find about the kinship and social structure of the Northwest Pacific Coast Indians? As information is given, encourage children to use the terms basic to an understanding of the information (unilateral social divisions, bilateral divisions, exogamic, lineage, extended family, moieties, etc.) and list these terms on the chalkboard with their definitions. Clarify and extend information as needed.

Ask the same question about the Hopi Indians and proceed in the same way. ("Kinship and Social Structure of the Northwest Pacific Coast Indians," and "Kinship and Social Structure of the Southwest Hopi Indians" in Appendix C are related to these questions.)

Help children note similarities and differences in the two Indian cultures and Midwest USA culture by a series of questions similar to the following:

What was the basic social unit of the Hopi Indians? The Northwest Pacific Coast Indians? What is the basic social unit of non-Indians in Midwest USA?
Did the Northwest Pacific Coast Indians live as nucleated families, extended families, lineages? How did the Hopis live? How do non-Indian families in Midwest USA normally live? Support your answer.
Upon what type of descent were the social units in the Hopi culture based? Give data to support your answer.
Upon what type of descent were the social units in the Northwest Pacific Coast culture based? Verify your answer.
What type of descent is followed by non-Indians in Midwest USA? Why do you say this?

What type of inheritance descent in social position is being used in Midwest USA when Mr. Joe Smith marries Miss Sally Jones and their children take the surname of Smith? What is the fundamental difference between this practice and the matrilineal system of the northern tribes of the Northwest Pacific Coast Indians and the Southwest Hopi Indians?

(Work with the children by asking sub questions until they see the types of descent followed in the Midwest. For example, patrilineality is being followed when the wife and children take the surname of the husband.

The fundamental difference between the Indian groups and the non-Indian Midwest USA people is that the tribal groups of the Hopi Indians and the northern Northwest Pacific Coast Indians were divided into divisions such as Snakes and Rabbits or Eagles and Ravens with each group having formalized rights and duties. In our system all of the population is not divided in Smiths and Jones with each group having certain duties and rights. But these Indian tribes no more ignored paternal rights than we disregard maternal rights even though we insist on paternal surnames only. The paternal relatives in the Indian tribes had responsibilities and rights that determined some of their attitudes and what they did all of their lives.)

Can you think of other inheritance practices, in social customs or worldly goods in the USA, that follow a matrilineal or patrilineal descent?

Describe social ranking in the Northwest Pacific Coast culture. Include ranked statuses, relation between heredity and wealth, how an individual could modify his social status, and slaves as chattel.

What did the Northwest Pacific Coast Indians value above all else?

Describe a potlatch. Why were potlatches given? What was the relation between potlatches and what the Northwest Pacific Coast Indians valued so highly?

Explain in your own words the meaning of this paragraph: The potlatch was the means through which a man claimed his right to his ancestral inheritance, made good his claim by proving it, and established a higher position for himself in public opinion. It also served as a major force for making all ranks feel a part of the culture.

What was the Hopi view of the good and proper in dealing with one another and with the world in general? How did they feel about having personal praise for their achievements, about putting one's own advantage ahead of the common good, and having extra responsibility placed upon them by their clan, society, or village? What did the Hopis value above all else?

How was marriage regarded by the Northwest Pacific Coast Indians? What was meant by "bride price" and what transactions were involved?

How was marriage regarded by the Hopi Indians? Describe the exchange of gifts and services in a Hopi marriage.

Do we have marriage customs that are related to or resemble those of the Hopi or Northwest Pacific Coast culture? Explain.

As a culmination of the study of social organization, help children formulate terse, concise statements which explain, describe, or determine similarities and differences in the social organization of the three cultures. Add these to the chart Generalizations Developed from Our Research.

Add the new terms, which were placed and defined on the board, and any others needed to the Big Book of Terms. "Vocabulary and Terms of Family Structure and Social Organization" in Appendix C give a suggested list for the teacher's use.

(1) (2) (4) (5) (8) (9) (10)

6. For the purpose of gathering information for oral reports about other cultural aspects of the Hopi and Northwest Pacific Coast Indians, organize the class into committees. These committees may be appointed by the teacher or they may be based on student interests. If the former, the teacher can control the membership of each committee and assure as much as possible a balance of strong, average and weak students academically and socially. If each committee is made up entirely of volunteers, some committees are likely to be very strong and others weak and their contributions less useful. A compromise of the two consists of asking each child to write (without consulting or talking with his neighbors) the names of three committees from the following list he would like to be a member of. The teacher can use this in selecting members for the committees. It will provide an opportunity to use the interests of students and at the same time provide for better working conditions.

The list of committees with a brief statement of the content to be covered are:

1. Homes and Villages of the Northwest Pacific Coast Indians

   Content: Location, type and construction of houses; materials used; arrangement of rooms; provision for heating; furnishings; type, location and purposes of other buildings in the village.

2. Homes and Villages of the Southwest Desert Hopi Indians

   Content: Location, type, and constructions of houses; materials used, arrangement of rooms, furnishings, other buildings in the village, their location and purpose.

3. Work, Games and/or Sports, Foods, and Dress of Men, Woman, and Children of the Northwest Pacific Coast Indians

   Content: Pursuits and responsibilities during each season of the year; daily life in each season; tools and products made to carry on this life; kinds of food used, how it was secured, prepared, preserved, and served; kind of clothing, differences in clothing according to rank.

4. Work, Games and/or Sports, Agriculture, Other Sources of Food, and Dress of Men, Women, and Children of the Hopi Indians

   Content: Pursuits and responsibilities during each season of the year; daily life in each season; tools and products made to carry on this life; agriculture, how it was carried on, how foods produced were prepared, preserved, and served; other sources of food and how these foods were prepared and served; kind of clothing and how made.

5. Religious Beliefs and Practices of the Northwest Pacific Coast Indians

   Content: Beliefs about creation, character of the universe as an orderly system, gods, immortality of certain economically important animals, rituals, lifelong assistance by a personal guardian spirit, shamen.

6. Religious Beliefs and Practices of the Hopi Indians

   Content: Beliefs about creation, about a Supreme Being, character of the universe as an orderly system, an individual's place in the world, power of prayer, religious rituals and ceremonies, sacred emblems, priest chiefs.

7. Societies, Dances, Ceremonies, and Cycle of Life of the Northwest Pacific Coast Indians

   Content: As indicated in the name of the committee.

8. Societies, Dances, Ceremonies and Road of Life of the Hopi Indians

Content: As indicated in the name of the committee.

Review research techniques with special emphasis on possible index titles to use for finding information about the topics each committee is researching, and standards for taking care of themselves. Have _all_ pertinent reference books easily accessible to children and be available to help those who have difficulty in selecting books and in using them after they are selected.*

At the beginning of each research period, devote a few minutes to helping children with problems they are having in their research, and to discussing standards for working in committees and for taking care of themselves. Again, at the end of the research period set aside time to share interesting information, to evaluate conduct during the research period, and to discuss what needs to be worked on especially hard the next work time. Also remind children to keep a list of words to add to the _Big Book of Terms_. (See Appendix C for "Vocabulary and Terms Related to Homes, Villages, Work, Games and Sports, Food, Dress of Men, Women and Children, Religious Beliefs and Practices, Societies, Dances, Ceremonies,Road of Life, and Cycle of Life.")

The following references have information on some or all of these topics. Use the indexes for page numbers. (Pages are not given for the teacher's use because of the extensiveness of material.)

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*The films "The Hopi Indian" and "Hopi Kachinas" have useful information. They may be shown to the entire class or used only by the groups studying Hopi culture.

References on Homes, Villages, Work, Games and Sports, Agriculture, Food, Dress of Men, Women and Children, Religious Beliefs and Practices, Societies, Dances, Ceremonies, Road of Life, and Cycle of Life

"And Then There Were Kachinas." (Appendix C)

"An Exhibit of a Kwakiutl House I Saw at the University of British Columbia Museum, July 6, 1968." (Appendix C)

Ault, Phil. *This is the Desert*.

Baity, Elizabeth Chesley. *Americans before Columbus*.

Baldwin, Gordon C. *America's Buried Past*.

Beck, Ethel Tyler. *Lummi Indian How Stories*.

Berke, Ernest. *The North American Indians*.

Bleeker, Sonia. *The Pueblo Indians, Farmers of the Rio Grande*.

Bleeker, Sonia. *The Sea Hunters, Indians of the Northwest Coast*.

Bowden, A. O.; de Porter, Carmen Gonzales; Cutright, Prudence; and Charters, W. W. *The Day before Yesterday in America*.

Brewster, Benjamin. *The First Book of Indians*.

Brindze, Ruth. *The Story of the Totem Pole*.

Burland. Cottie. *North American Indian Mythology*.

Curtis, Edward S. *The North American Indian*. Vol. 11 and 12.

Dorian, Edith, and Wilson, W. N. *Hokahey: American Indians Then and Now*.

Driver, Harold Edwon. *Indians of North America*.

Drucker, Philip. *Indians of the Northwest Coast*.

Drucker, Philip. *Cultures of the North Pacific Coast*.

Embree, Edwin R. *Indians of the Americas*.

Fisher, Olive, and Tyner, Clara. *Totem, Tipi, and Tumpline*.

Fletcher, Sydney E. *The American Indian*.

Fletcher, Sydney E. *The Big Book of Indians*.

Gorham, Michael. *The Real Book about Indians*.

Grant, Bruce. *American Indians Yesterday and Today*.

Gridley, Marion E. *Indians of Yesterday*.

Haig-Brown, Roderick. *The Whale People*.

Harris, Christie. *Once Upon a Totem*.

Harris, Christie. *Raven's Cry*.

Hawthorn, Audrey. *Art of the Kwakiutl Indians and Other Northwest Coast Tribes*.

Hawthorn, Audrey. *People of the Potlatch*.

Hays, Hoffman Reynolds. *Children of the Raven: The Seven Indian Nations of the Northwest Coast*.

Hofsinde, Robert. *Indians at Home*.

Hofsinde, Robert. *Indian Fishing and Camping*.

Hofsinde, Robert. *Indian Hunting*.

Hofsinde, Robert. *The Indian's Secret World*.

Hofsinde, Robert. *The Indian Medicine Man*.

Hofsinde, Robert. *Indian Warriors and Their Weapons*.

Holling, Holling C. *The Book of Indians*.

"Hopi Agriculture." (Appendix C)

"Hopi Homes." (Appendix C)

"Hopi Religion." (Appendix C)

"Hopi Myths of the Creation." (Appendix C)

Houston, James. *Ghost Paddle--A Northwest Coast Indian Tale*.

Houston, James. *Eagle Mask: A West Coast Indian Tale*.

Hunt, W. Ben. *The Golden Book of Indian Crafts and Lore*.

James, Harry. *A Day in Oraibi: A Hopi Indian Village*.

Jenness, Diamond. *The Indians of Canada*.

Josephy, Alvin M., Jr. *The American Heritage Book of Indians*.

Kidd, Kenneth E. *Canadians of Long Ago: The Story of Canadian Indians*.

Kirk, Ruth. *David, Young Chief of the Quileutes*.

La Farge, Oliver. *The American Indian*.

Leavitt, Jerome. *America and Its Indians*.

Leechman, Douglas. *Native Tribes of Canada*.

Lisitzky, Gene. *Four Ways of Being Human*.

Lovell, Josephine. *Watlala: An Indian of the Northwest*.

Marriott, Alice Lee. *Indians of the Four Corners*.

Marriott, Alice. *The First Comers: Indians of America's Dawn*.

Mason, Bernard S. *Book of Indian Crafts and Costumes*.

McFeat, Tom. Indians of the North Pacific Coast.

McNeer, May. The Story of the Southwest.

McNeer, May, and Ward, Lynd. The American Indian Story.

Morris, Loverne. The American Indian as Farmer.

Moyers, William, and Cooke, David C. Famous Indian Tribes.

"Northwest Pacific Coast Indians." (Appendix C)

Parker, Arthur C. The Indian How Book.

Payne, Elizabeth. Meet the North American Indians.

Province of British Columbia Provincial Archives, Provincial Museum. British Columbia Heritage Series, Series I, Our Native Peoples.

Radin, Paul. The Story of the American Indian.

"Shamen of the Northwest Coast." (Appendix C)

Shannon, Terry. Little Wolf, The Rain Dancer.

Shannon, Terry. Tyee's Totem Pole.

Silverberg, Robert. Home of the Red Man: Indian North America before Columbus.

Stirling, Matthew W. Indians of the Americas.

The "Chilkat Blanket." (Appendix C)

Tunis, Edwin. Indians.

Underhill, Ruth M. Indians of the Pacific Northwest.

Uprichard, Muriel. Three Little Indians.

Vlahos, Olivia. New World Beginnings.

Waters, Frank. Book of the Hopi.

Wherry, Joseph H. The Totem Pole Indians.

Worthylake, Mary M. Moolack: Young Salmon Fisherman.

(4) (5) (9)

7. When one committee has exhausted the materials available, initiate a total group discussion on giving committee reports. Culminate it with a chart similar to the following:

Making a Committee Report

The committee makes a topical outline of the total report in a committee meeting.
The committee decides which topic(s) in the outline each member will prepare.
Each member makes an outline of important points he thinks should be included in his topic(s).
The entire committee reviews these outlines and revises them if necessary.
The committee decides upon the order of topics in the total presentation.
Each individual practices his report alone.
The committee practices the total report, and decides on any visual aids to be used--pictures, realia, charts, etc.
The visual aids are collected and/or made.
An introduction is prepared, either by an appointed individual or by the total committee.
The total report is practiced until it is clear, well stocked, accurate, interesting and not more than fifteen minutes long.

(5) (6) (7) (8) (9)

8. As children finish their research and start working on the committee reports, be alert to both academic and social problems which arise and help the children resolve them. Check children's topical outlines as well as points used to detail each topic. Encourage children to practice their presentations after they have been organized and ask to be invited to these practice sessions so weaknesses and mistakes in both content and presentation can be strengthened and corrected.

When all reports are finished, arrange with the children the order of presentation. (The two reports on each general topic should be given one after the other.) After a discussion on presenting reports, listening to, and discussing them, aid the children in formulating standards similar to the following:

When You Give a Committee Report

Give the subject of the report.
Have an introduction that makes the audience want to hear the report.
Make every sentence tell something about the subject.
Tell things in the right order.
Stop when all information has been given.
If a discussion period follows, answer all questions clearly and to the point.
Accept criticism graciously.

When You Take Part in a Discussion

Listen carefully to what others say.
Help others to participate.
Give everyone a chance to talk.
Ask to have an explanation for anything you do not understand.
Talk only when no one else is talking.
Keep to the subject.
Talk loud enough for all to hear.
Be courteous when you disagree.

A Good Listener

Looks at the speaker.
Listens to the speaker.
Thinks about what the speaker is saying and relates it to what he already knows.
Waits until the speaker has finished to ask questions and make comments.

(8) (9)

9. Make the days the reports are given very special days. Show by your actions and comments that you are looking forward to them.

Schedule plenty of time for each committee to report and see that the reports do not drag, are not monopolized by a few children, and are kept within the time limits. Arrange the room so the committee reporting is seated at a table in front of the audience.

During the reports provide a good model by being attentive and interested in the reports. At the same time be aware of children who need help in taking care of themselves.

The discussion periods held after the two reports on the same general topic have been given provide an opportunity for asking questions, clearing up misinterpretations, adding to the information given and noting similarities and differences in the patterns of life reported for the Hopi and Northwest Pacific Coast Indians, and with the patterns of life they are familiar with in Midwest USA.

Interrelating research data assembled by the committees, with data they already have about their own culture, to determine similarities and differences requires the capacity to identify points in the data, to differentiate the relevant from the irrelevant, to discern cause and effect relationships, and finally to generalize. Children may be helped in this process by being asked a sequence of questions such as the following:

> What did you find in these reports which will help us see similarities and differences in the life patterns of the Hopi Indians, the Northwest Pacific Coast Indians, and the people we know who live in Midwest USA?

If children need more help than the key question gives, ask related sub or clue questions to help them in the thinking process.

Some examples of such clue questions related to the reports on work might be:

> What determined the kind of work done by the Hopi Indian people? The Northwest Pacific Coast Indians?
> What determines the kind of work done by people in our culture--Midwest USA?
> Etc.

If this does not get thinking started, ask questions which give even more clues such as:

> What did the Hopi people do in the spring?
> The Northwest Pacific Coast people?
> What do the people in Midwest USA do in the spring?
> What do farmers do? People who work in offices?
> Etc.

When some relevant points have been identified, ask a second key question:

> Why did (does) this happen--that is, what is the reason for this type of spring work?

If this does not lead to children giving relevant information, ask clue questions until children are led to points which apply directly to the question.

Then a third key question may be asked:

> What does all of this information mean?

And finally a fourth:

> What would you conclude?

If children have trouble seeing the dependence of primitive people, and some people today, upon the immediate physical environment and its relation to work at a particular season of the year, clue questions as described above may also need to be used with the third and fourth key questions above. They may also be needed in helping children draw such conclusions as:

> Work in the spring for the Hopi Indians and the Northwest Pacific Coast Indians was closely related to happenings in the immediate physical environment because it was the source of their food.
>
> The work of crop and truck farmers, and to some extent that of certain kinds of construction workers and others who work outdoors in present day Midwest USA, are determined by seasonal changes in the physical environment. The work of others such as doctors, bankers, secretaries, waitresses, is not greatly affected by the seasons.

Use the basic key questions to help children identify other points from the same reports which will lead to further conclusions about likenesses and differences in the three cultures being studied. Add the conclusions to the chart Generalizations Developed from Our Research.

Use a similar procedure and the basic key questions for drawing generalizations from the other reports which will be given.

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

10. Tell or read a creation myth of the Hopi Indians and of the Northwest Pacific Coast Indians. The Book of the Hopi by Frank Waters, "Hopi Myths of the Creation" (Appendix C) and Nine Tales of Raven by Fran Martin will provide help.

Review what Christians, Jews, and Moslems believe about the creation and where this is written down. Compare it with the creation myths read of the Hopis and Northwest Pacific Coast Indians.

(2) (3) (4) (10)

11. Explain the meaning of the terms fables, myths, and legends. Read several of the fables in Son of Raven Son of Deer by George Clutesi, or other appropriate reference, to the class and use the following questions as a basis for a class discussion:

We have fables, myths, and legends in our non-Indian literature. Name some fables, some myths, and some legends. Why are they in our literature?

Why were fables, myths, and legends so important to the prehistoric Indian peoples?

What could Indian children learn from the fables you have just heard?

What can we learn about the Indian people from these fables?

(2) (4) (10)

12. Put as many books as are available containing myths, legends, and fables of the Hopi and Northwest Pacific Coast Indians on a separate shelf. Provide a time for children to read at least one story and encourage them to read more during their free time. Set aside a time when children can talk about the stories they read and why the Indian children were told these stories. Note similarities and differences in the stories discussed.

References on Fables, Myths, and Legends of the
Hopi and Northwest Pacific Coast Indians

Ayre, Robert. Sketco the Raven.

Bierhorst, John, ed. The Red Swan: Myths and Tales of American Indians.

Boma, "Totem Poles with the Stories They Tell." (Appendix C)

Burland, Cottie. North American Indian Mythology.

Clark, Ella Elizabeth. Indian Legends of Canada.

Clutesi, George. Son of Raven Son of Deer.

Curtis, Edward S. The North American Indian, Vols. 11 and 12.

Curtis, Edward S. The Girl Who Married a Ghost and Other Tales.

Harris, Christie. Once Upon a Totem.

Hays, Hoffman Reynolds. Children of the Raven.

Jenness, Diamond. The Corn Goddess and Other Tales from Indian Canada.

Khahtsahlana, Chief August Jack, and Charlie, Domanic. Squamish Legends.

Leechman, Douglas. Native Tribes of Canada.

Lisitzky, Gene. Four Ways of Being Human.

Manning-Sanders, Ruth. Red Indian Folk and Fairy Tales.

Martin, Fran. Nine Tales of Raven.

Martin, Fran. Nine Tales of Coyote.

McKee, Louise, and Summers, Richard. Dusty Desert Tales.

Radin, Paul. The Story of the American Indian.

Running, Corrine. When Coyote Walked the Earth: Indian Tales of the Pacific Northwest.

Thornton, Mildred Valley. Indian Lives and Legends.

Waters, Frank. Book of the Hopi.

Wolf, Peter Gray. Gray Wolf Stories: Indian Mystery Tales.

Wherry, Joseph H. The Totem Pole Indians.

(4) (7) (10)

13. Show the film "The Loon's Necklace." Supplement with pictures of masks from available material. Help children verbalize common characteristics they see in the masks.

(4) (8) (10)

14. Each of the Indian cultures had distinctive forms of art. This art pervaded all parts of their life and had a living meaning to every person in the culture. To help the students get a better understanding of it and its place in the culture, prepare a short

lecture on art in each of the two cultures. In each lecture include the kind of art objects, the use made of these objects, materials used for making them, how they were decorated, the reason for using these materials and the particular motifs which decorated the objects, how the tradition for portraying these forms contributed to their artistic quality, and a summary of characteristics of each culture's art. Illustrate with pictures from the references given below.

If a copy of People of the Potlatch by Audrey Hawthorn is available, close the lecture on "Northwest Pacific Coast Indian Art" by reading the excerpts about the Kwakiutl Year as suggested below and showing pictures of the representative objects listed. These pictures may be found in People of the Potlatch and several of the other books listed in the reference list below.

The Kwakiutl Year
Excerpted from People of the Potlatch

Summer: Quest for Food. Start with the paragraph on page 12 which begins "In the spring . . ." and close with the paragraph ending "which was looked forward to for the winter months" on page 13.

Some representative objects used in the sea during this season are: cod lures, cod hooks, herring hooks, halibut hooks, sea otter net floats, fish traps, bone net sinkers, oolachon paddles, oolachon nets, canoes, fish clubs, first salmon ceremony implements.

Some representative objects used on the land: spruce root baskets, root digging sticks, clam digging sticks, collecting baskets, bows and arrows.

Late Summer: The Potlatch. The entire paragraph on page 13 which starts with "In late summer . . ."

Some objects representative of those which would be redistributed during a potlatch ceremony: horn spoons, abolone shell ear rings, silver bracelets, grease dishes, carved boxes, twined spruce root baskets, cedar root hats, blankets, carved chests, canoes, dishes.

Ceremonial regalia associated with the potlatch: talking sticks, headpieces, potlatch hats, ceremonial daggers, ceremonial masks, ceremonial wedges, ceremonial costumes, totem poles.

Objects related to the copper complex: ceremonial spears used to "spear copper like a whale" at marriage transfer ceremonies, copper, copper-cutting strands, copper rattles.

Winter: Winter Dance Season. Read the entire paragraph on page 13 which starts "With the onset of the rainy winter months . . ."

Objects representative of the ceremonies of the secret societies: masks, ceremonial skulls, rattles, whistles, head rings, neck rings.

Prepare a similar ending for the lecture on Hopi art by writing brief summaries of the divisions of the Hopi year and finding pictures of representative objects. As pictures of the Hopi objects of art are shown, point out the materials they are made of and the decorations used. Be sure to include objects used in the summer, fall, and winter in their agricultural work, ceremonies, rituals, and other activities.

15. Show the film "Making a Mask." Have each child make either a Northwest Pacific Coast or Hopi Indian mask. Use them for creative dramatization or an exhibit.

16. Have a teacher led discussion of similarities and differences of art in the two Indian cultures and in non-Indian art in Midwest USA. After these have been explored as far as profitable, ask children to say in a short way what they have found. When the

conclusions have been formulated in clear, concise statements, they may be added to the chart Generalizations Developed from Our Research.

Add new terms to the Big Book of Terms. A list of vocabulary and terms for the teachers use is in Appendix C.

(1) (2) (3) (4) (8) (9) (10)

References on Art of the Hopi and Northwest Pacific Coast Indians

"Art of the Northwest Pacific Coast Indians." (Appendix C)

Brindze, Ruth. The Story of the Totem Pole.

Curtis, Edward S. The North American Indian, Vols. 11 and 12.

Davis, Robert Tyler. Native Arts of the Pacific Northwest.

Driver, Harold Edwon. Indians of North America.

Drucker, Philip. Cultures of the North Pacific Coast.

Drucker, Philip. Indians of the Northwest Coast.

Fewkes, Jesse Walter. Hopi Kachinas Drawn by Native Artists.

Garfield, Viola, and Forrest, Linn A. The Wolf and the Raven. Totem Poles of Southeastern Alaska.

Glubok, Shirley. The Art of the North American Indian.

Gunther, Erna. Art in the Life of the Northwest Coast Indian.

Hawthorn, Audrey. Art of the Kwakiutl Indians and Other Northwest Coast Tribes.

Hawthorn, Audrey. People of the Potlatch.

Hays, Hoffman Reynolds. Children of the Raven: The Seven Indian Nations of the Northwest Coast.

Holm, Bill. Crooked Beak of Heaven: Masks and Other Ceremonial Art of the Northwest Coast.

Hunt, W. Ben. The Golden Book of Indian Crafts and Lore.

"Indian Art . . . Receiving Its Due." (Appendix C)

Inverarity, Robert Bruce. *Art of the Northwest Coast Indians*.

Leavitt, Jerome E. *America and Its Indians*.

Mason, Bernard S. *Book of Indian Crafts and Costumes*.

Matthews, Downs. "Reproducing Alaska's Aboriginal Art."
The Humble Way. First Quarter, 1972.

McFeat, Tom. *Indians of the North Pacific Coast*.

O'Kane, Walter C. *The Hopis: Portrait of a Desert People*.

Radin, Paul. *The Story of the American Indian*.

Shannon, Terry. *Tyee's Totem Pole*.

Siebert, Erna, and Werner, Forman. *North American Indian Art*.

The Beaver Magazine of the North. Spring 1963. Outfit 293.

"Totem Pole Park." (Appendix C)

Tunis, Edwin. *Indians*.

"Use of Cedar Bark." (Appendix C)

Vlahos, Olivia. *New World Beginnings*.

Wherry, Joseph H. *The Totem Pole Indians*.

(1) (2) (3) (4) (10)

Conclusion

17. From the chart titled *Generalizations Developed from Our Research* have the students pick out all of the generalizations that give information about anthropologists--what they do and why they do it. After these have been isolated, by using (if needed) focusing and clue questions similar to the ones suggested throughout the unit, help them arrive at a statement that has the same general meaning as Main Idea I on page 2.

Have each child read through the generalizations on the chart again and group the statements that tell about the family as a social unit. Ask a student to read the statements he has selected and have the group critically evaluate their relation to the importance of the family as a social group. After this screening check the remaining generalizations on the chart to see if any pertinent ones have been overlooked.

When the list has been judged, complete by the class and the teacher, help the children, through the use of focusing and clue questions, make one statement that says in a short way what the generalizations tell about the family as a social unit. The statement made should have the same basic meaning as Main Idea II on page 2.

In a similar way help children derive statements that convey the basic meanings of Main Ideas III, IV, V, and VI on pages 2-3. Keep in mind that generalizations on the chart from which statements of Main Ideas are being derived may contribute to several--not just one.

The Main Ideas developed by the group may be made into a new chart titled Main Ideas about Culture.

(1) (2) (3) (4) (5) (7) (8) (9) (10)

18. If desired the unit may be closed with an exhibit. The guest list, invitations, display of products resulting from the unit, and the program explaining the unit should be planned and carried out by the children with a minimum of help from the teacher.

(2) (3) (4) (5) (7) (9) (10)

Evaluation

Evaluation is the process of determining how far the learning experiences as they are planned and taught are actually helping students acquire the educational objectives.

Since educational objectives are the behavioral changes sought, an evaluation instrument must appraise the change brought about as a result of the learning experiences. There are ten different behavioral aspects in the objectives for this unit. (See Chart 1, pp. 4-8.) So the items in the evaluation instruments are an attempt to assess these ten behaviors. The instruments and keys are in Appendix D. An analysis titled "Test Items for Various Objectives" in the same Appendix indicates the numbers of the items designed for the various behavioral aspects on Chart 1.

It is suggested that the same instruments be given first as a pre-test before the unit starts and then as a post-test after the unit closes. In this way a comparison of results can be made and some idea of the success or failure of the unit, as designed and taught, in bringing about the behavioral changes desired can be determined.

Bibliography

Reference Books for Children

Ault, Phil. *This is the Desert*. New York: Dodd, Mead and Co., 1959.

A thorough treatment of the desert areas in the United States. A fine reference for facts about the physical features of the land where the Southwestern Desert Indians lived.

Fifth and sixth grade students reading at grade level should have no difficulty reading this book.

Ayre, Robert. *Sketco the Raven*. Toronto: The Macmillan Co., 1961.

These legends are authentic Indian tales and are drawn from the Raven Cycle common to the Indians along the northern Pacific coast. The raven was the hero of many tales, though he had many names among the various tribes.

Fourth or fifth grade reading level.

Baity, Elizabeth Chesley. *Americans before Columbus*. New York: The Viking Press, 1961.

An excellent account based on archaeological evidence. The illustrations are interpretations of evidence and the photographs are documented.

About fifth grade reading level.

Baldwin, Gordon C. *The Ancient Ones*. New York: W. W. Norton and Co., 1963.

A history of the Indians of the Southwest containing excellent pictures of early Indian homes, tools, burials, etc.

Grade level five and above.

Baldwin, Gordon C. *America's Buried Past*. New York: G. P. Putnam's Sons, 1962.

This is a story of American archaeology.

The book starts out with a brief summary of discovery of America by people migrating from northeast Asia. Then the author devotes two chapters to explaining the methods of the archaeologist and the reason for his study. From these chapters which explain how the story of these first Americans have been recovered from the earth, the author guides the reader through a long series of events down to the discovery of America by Christopher Columbus.

Good illustrations although not too many of them.

About fifth grade level.

The Beaver: Magazine of the North. Spring 1963. Outfit 293. Published quarterly by Hudson's Bay Company, Winnipeg, Canada.

This issue has an article on, and wonderful illustrations of, the West Coast Indian Art used in the Fine Arts Exhibition at the Seattle World's Fair in 1962.

Beck, Ethel Fyles. Lummi Indian How Stories. Caldwell, Idaho: Caxton Printers, 1955.

Each story in this book gives a clear account of the way of life of an Indian tribe of Northwestern Washington before the days of the white man.

The reading level is easy--about fourth grade.

Benjamin, Nora. The First Book of Archaeology. New York: Franklin Watts, Inc., 1957.

A description of the work of archaeologists: what they find, how they interpret what they find, and what is done with what has been found.

Fourth grade reading level.

Berke, Ernest. The North American Indians. Garden City, New York: Doubleday, 1963.

Good information and pictures about Indians of the Northeast, Southeast, Plains, Southwest, Columbus Plateau and Northwest Coast.

The book is of picture book size and is about fourth grade reading level.

It was endorsed by Frederick J. Dockstuder, Director of the Museum of the American Indian in New York.

Bierhorst, John, ed. The Red Swan: Myths and Tales of American Indians. New York: Farrar, Straus and Giroux, 1976.

Several tales of the Northwest Pacific Coast Indians are included in this anthology.

Children of fifth and sixth grade reading ability can read these tales easily.

Bleeker, Sonia. The Pueblo Indians, Farmers of the Rio Grande. New York: William Morrow and Co., Inc., 1956.

Miss Bleeker has been "most successful in capturing the distinguishing characteristics of the Pueblo dwellers." Library Journal.

Written at approximately fourth grade level.

Bleeker, Sonia. The Sea Hunters: Indians of the Northwest Coast. New York: Wm. Morrow and Co., 1951. Illustrated by Althea Kerr.

An accurate book about the life of the Northwest Coast Indians during the time before the white man destroyed their way of life. Miss Bleeker is an anthropologist but she made her book doubly accurate by having Marius Barbeau of the National Museum of Canada, Ottawa, read and criticize the manuscript.

Third or fourth grade level.

Bond, Guy L.; Clymer, Theodore; Chase, Naomi; and Cooke, Dorothy E. Deeds of Men. Chicago: Lyons and Carnahan, 1962.

Deeds of Men is a reading text for middle grade children. A selection from Digging in the Yucatan by Ann Axtell Morris in the section "What is Archaeology?" is especially worthwhile. It is on pages 353-401.

Bowden, A. O.; de Porter, Carmen Gonzales; Cutright, Prudence; and Charters, W. W. *The Day Before Yesterday in America*. New York: Macmillan Co., 1946.

Typical textbook type of book of about third grade difficulty. Would provide easy reading for slow readers.

Brewster, Benjamin. *The First Book of Indians*. New York: Franklin Watts, 1950.

A great deal of information is given in the few pages devoted to the various tribes in this introduction to Indians. The last paragraph on page 53 has a fine concept for children to get.

It is written for children at third or fourth grade reading level.

Brindze, Ruth. *The Story of the Totem Pole*. New York: Vanguard Press, Inc., 1951.

Very interesting, authentic information around a weak story line. Illustrations are good.

It would be comfortable reading for fifth and sixth grade level readers.

Burland, Cottie. *North American Indian Mythology*. London: Paul Hamilyn Limited, 1965.

Good accounts of the way of life of the various cultural divisions are given so that the relations between the myths and the cultures from which they arose are evident.

For mature readers only.

Cadbury, B. Bartram; Collins, Stephen; Lemmon, Robert S.; Klots, Alexander B.; Klots, Elsie; and Ress, Etta Schneider. *The Community of Living Things in Forest and Woodland*. Mankato, Minnesota: Creative Educational Society, Inc., 1956.

The title is descriptive of the content of this book. Approximately fifth grade reading level.

Clark, Ella Elizabeth. *Indian Legends of Canada*. Toronto: McClelland and Stewart Limited, 1960.

This book includes myths, legends, personal narratives and historical traditions from thirty North American Indian tribes in all the culture areas of the country.

It is for readers of all ages but the print is small and children of fifth grade reading level or above would likely enjoy it most. A good book.

Clutesi, George. *Son of Raven Son of Deer*. Sidney, British Columbia, Canada: Gray's Publishing Ltd., 1967.

Folklore tales were used widely by the Northwest Coast Indians to teach the young the many wonders of nature and the mores of the tribe. This is a collection of twelve fables of the Tse-shaht people which have been handed down in the Clutesi family for at least four hundred years. The Tse-shaht people belong to the Nootka tribe.

Ah-tush-mit, Son of Deer, and Ko-ishen-mit, Son of Raven, are two of the principal characters in the tales.

Illustrations are by the author and in the Nootka tradition as interpreted by him.

Fourth or fifth grade reading level.

Curtis, Edward S. The North American Indian. New York: Johnson Reprint Corporation.

There are twenty volumes in this series picturing and describing the Indians of the United States, Canada and Alaska.

The twelfth volume, which was published in 1922, is devoted to a study of the Hopi Indians: physical characteristics of the land, general description of the Hopis, clan legends, religion, ceremonies, tradition and mythology, villages, agriculture, etc. The illustrations are excellent.

The eleventh volume was published in 1916 and includes: a general description of the Nootka and Haida Indians of the Northwest Pacific Coast: warfare, sociology, winter ceremonies, mythology, villages, etc. The illustrations are as informative as the text.

Both volumes give a comprehensive coverage of the culture(s) they deal with.

Suitable for the teacher and readers of fifth grade reading level or above.

Curtis, Edward S. The Girl Who Married a Ghost and Other Tales. New York: Fair Winds Press, 1978.

Legends from both the Northwest Pacific Coast Indians and Southwest Desert Indians are included in this collection.

Fifth or sixth grade reading level.

Davis, Robert Tyler. Native Arts of the Pacific Northwest. Stanford, Cal.: Stanford University Press, 1949.

Reproductions of art objects made by native artists and craftsmen for practical and ceremonial purposes collected by Axel Rasmussen and now in the Portland Art Museum.

Very fine. Children of all ages would enjoy the pictures in this book.

Dorian, Edith, and Wilson, W. N. Hokahey: American Indians Then and Now. New York: McGraw-Hill, 1957.

This entertaining historical study of the American Indian is approached by dividing the United States into several major sections and dealing with several tribes within each section. Possibilities for the future of these tribes are explored.

The book has been approved by Indians.

Children with fifth or sixth grade reading ability should be able to read this.

Driver, Harold Edwon. Indians of North America. Chicago, Illinois: University of Chicago Press, 1961.

Teachers and mature readers adept at using the index will find a wealth of material on both Hopi and Northwest Pacific Coast Indian cultures.

Children of all reading levels can learn much from the excellent pictures of art objects.

Drucker, Philip. Cultures of the North Pacific Coast. San Francisco: Chandler Publishing Co., 1965.

A fine account of the cultures of the Northwest Pacific coast by one of the leading anthropologists in this country and an authority on the aboriginal cultures of the American Northwest.

There is good coverage of habitat, economy and technology, social and political organization, religion and rituals, the year's cycle, art and dwellings.

Illustrations are very good, especially the colored ones of masks and other art objects.

An excellent reference for mature readers and the teacher.

Drucker, Philip. Indians of the Northwest Coast. Garden City, New York: The Natural History Press, 1963.

The land, the people, and prehistory of the Northwest Pacific Coast area are described and then the culture--social structures, marriage customs, economy and technology, religion, rituals, art, wars, and feuds--is considered.

Only mature readers will be able to read it, but other children can learn much from the illustrations.

It is an American Science Museum Book.

Elting, Mary, and Folsom, Franklin. The Story of Archaeology in the Americas. New York: Harvey House Publishers, 1960.

This is a very useful book. It was reviewed for scientific accuracy by a curator emeritus of the University Museum at the University of Pennsylvania.

It is clearly and interestingly written and gives much valuable information. I would think that every child who reads the book would have dreams of being an anthropologist.

Middle grade children reading at grade level should be able to read it without difficulty.

It is interesting to know that Mary Elting is Mrs. Folsom in private life, and that she and her husband write under the pseudonyms of Benjamin Brewster and Michael Gorham, in addition to other pseudonyms they use for their individual writing.

Mary Elting's other pseudonyms are Davis Cole and Campbell Tatham. In addition to the pseudonyms Franklin Folsom shares with Mary Elting he uses the pseudonyms Samuel Cutler, Lyman Hopkins, and Troy Nesbit.

Embree, Edwin R. Indians of the Americas. Boston: Houghton Mifflin Company, 1939.

The realistic description of the Pueblo Indians of the Southwest makes the reader feel he knows these people personally. Although the section is on Pueblo Indian life in general it in no way contradicts the way of life of the Hopi.

Fifth grade reading level.

Fewkes, Jesse Walter. Hopi Kachinas Drawn by Native Artists. Chicago: Rio Grande Press, 1962.

Just what the title implies. Both teachers and students would enjoy and learn much about kachinas from these pictures.

Fisher, Olive, and Tyner, Clara. Totem, Tipi, and Tumpline. Toronto: J. M. Dent and Sons, 1955.

Stories of the Indians by the Western Sea (Northwest Pacific Coast).

Approximately fifth grade level.

Fletcher, Sydney E. The American Indian. New York: Grosset and Dunlap, 1954.

General account of Indians in America.

Grade level seven and above.

Fletcher, Sydney E. The Big Book of Indians. New York: Grosset and Dunlap, 1950.

This book has pictures of activities from various tribes with captions which give accurate information.

A double page is devoted to Kachina dolls and another to totem poles and canoes.

Although the reading level for the captions is fifth grade, children with less reading ability can get much from the pictures.

Pages in the book are unnumbered.

Garfield, Viola, and Forrest, Linn A. The Wolf and the Raven: Totem Poles of Southeastern Alaska. Seattle: University of Washington Press, 1961.

A good reference on totem poles for mature readers.

Glubok, Shirley. The Art of the North American Indian. New York: Harper and Row, 1964.

Examples of art photographed from actual art pieces in museums. Simple explanations are included.

Fourth or fifth grade level.

Gorham, Michael. The Real Book about Indians. Garden City, New York: Doubleday and Co., 1953.

Accurate information about many aspects of various Indian cultures. "Farmers in the Cliffs" is about Pueblo Indians.

Reading level of grade three and above.

Grant, Bruce. American Indians Yesterday and Today. New York: E. P. Dutton and Co., Inc., 1960.

An alphabetically arranged encyclopedia designed as a comprehensive reference work as well as a history of the American Indian from the time of the discovery of America by Columbus to 1960.

Fifth grade level readers could use it without difficulty.

Gridley, Marion E. Indians of Yesterday. New York: M. A. Donohue and Company, 1940.

A comprehensive account of prehistoric Indians. Good accounts of how Indians came to North America, cultural divisions, and various groups including the Southwest Desert Indians and the Northwest Pacific Coast Indians.

Well illustrated.

Fifth grade reading level.

Gunther, Erna. Art in the Life of the Northwest Coast Indians. Portland, Oregon: Portland Art Museum, 1966.

A presentation of the Rasmussen Collection in detail together with Mr. Alex Rasmussen's data on the objects given in a way which draws art and ethnology together. (Mr. Rasmussen collected from 1926 to 1945.) Dr. Gunther explains the motivation for the production of these objects in terms of those facets of Northwest Coast Indian cultures which were the basis for their use and meaning.

Not in color but very good. Much better for children than Native Arts of the Pacific Northwest by Robert Tyler Davis. Children would get much from the pictures.

Haig-Brown, Roderick. The Whale People. St. James Place, London: Collins, 1962.

A story about the Indian tribes in British Columbia who hunted the giant whales of the Pacific. It gives a picture of the customs and taboos of the Hotsath whaling people.

It is also a story of Atlin the son of the Hotsath chief Nit-gass; how he grew to manhood, how he learned to hunt whales as his father and grandfather had done before him.

Written at fifth or sixth grade reading level.

Harris, Christie. Once Upon a Totem. New York: Atheneum, 1963.

Authentic information and Northwest Pacific Coast Indian myths are strong features of this book.

Approximately fifth grade reading level.

Harris, Christie. Raven's Cry. New York: Atheneum, 1966.

A fascinating story of the Northwest illustrated by Bill Reid.

Fifth grade reading level.

Hawthorn, Audrey. Art of the Kwakiutl Indians, and other Northwest Coast Tribes. Seattle: University of Washington Press, 1967.

A beautiful book which illustrates the wide array of material culture manufactured by the Indians of the Northwest Coast of North America.

It includes color photographs of the complete collection of objects made for ceremonial use which are now in the Museum of Anthropology at the University of British Columbia.

Children at all levels of reading would enjoy the pictures in this book.

Hawthorn, Audrey. People of the Potlatch. Vancouver, B.C.: Vancouver Art Gallery, 1956.

An excellent summary of the life of the People of the Northwest Coast. All aspects of the culture are covered in a short concise way. In addition, over half of the book is made up of illustrations from museum exhibits. A real treasure.

Print is small but fifth grade level readers should have no trouble reading it.

Hays, Hoffman Reynolds. Children of the Raven: The Seven Indian Nations of the Northwest Coast. Hightstown, New Jersey: McGraw Hill Book Company, 1975.

"Section II The Culture" is an excellent source of information about these seven groups of people who differed somewhat in physical characteristics and language but whose way of life was basically similar.

All areas of the culture are considered including several tales and many pictures of art products.

Except for the pictures of art products, most suitable for mature readers and the teacher.

Hibben, Frank C. Treasure in the Dust. Philadelphia: J. B. Lippincott Co., 1951.

The story of the Negro cowboy who found the first Folsom points.

Fourth or fifth grade reading level.

Hofsinde, Robert. Indians at Home. New York: William Morrow and Company, 1964.

The author describes how Indian homes were built and the life and customs that went with each home. Nice illustrations by the author.

Third or fourth grade reading level.

Hofsinde, Robert. Indian Hunting. New York: Wm. Morrow and Co., 1962.

An informative and authentic book covering hunting customs in different cultural areas.

Third or fourth grade reading level.

Hofsinde, Robert. The Indian Medicine Man. New York: William Morrow and Co., 1966.

The stories "Medicine Men and Their Training" and "Shamans of the Totem People" are most useful for the present purpose.

Easy reading level--third or fourth grade.

Hofsinde, Robert. The Indian's Secret World. New York: William Morrow and Co., 1963.

The story "Kachinas" takes the reader into the Hopi Indian world of mystery and beauty connected with their ceremonial dances and rituals.

Illustrated by the author.

Third or fourth grade reading level.

Hofsinde, Robert. Indian Fishing and Camping. New York: William Morrow and Company, 1963.

The author shows how the Northwest Pacific Coast Indians fashioned their fish traps out of cordage from roots, fibers, and the inner bark of trees and how other Indians learned to make their fishing equipment from the natural materials found around them.

Exact, lovely illustrations by the author.

Third or fourth grade reading level.

Hofsinde, Robert. Indian Warriors and Their Weapons. New York: Wm. Morrow and Co., 1965.

The title is very descriptive of the content.

Third or fourth grade reading level.

Holling, Holling C. The Book of Indians. New York: Platt and Munk Co., 1935.

North American Indians are divided into four cultural areas: People of the Forest, People of the Plains, People of the Desert and People of the Sea.

The homelife of Indian children in each cultural area is discussed.

The book has a fine glossary.

Approximately third or fourth grade reading level.

Holm, Bill. Crooked Beak of Heaven: Masks and Other Ceremonial Art of the Northwest Coast. Seattle: University of Washington Press, 1972.

A catalogue of the Sidney Gerber Memorial Collection of Northwest Indian Art in the Thomas Burke Memorial Washington State Museum.

Excellent black and white pictures of art objects.

Children will get much from the pictures and the teacher from the text.

Houston, James. Ghost Paddle: A Northwest Coast Indian Tale. New York: Harcourt Brace Jovanovich, Inc., 1972.

Hooits is fifteen but he has never known a time of peace. A state of constant warfare, produced by misunderstanding and treachery, has existed between his tribe and the people of the Inland River.

Now his father, Sea Wolf, decides it is time to go and seek peace. He carves Hooits a paddle he has seen in a dream and leads a party of unarmed young people from his tribe on a dangerous journey into the heart of the enemy territory. When Hooits is forced to fight with his "ghost" paddle for a weapon, he learns that making peace requires as much courage as fighting a war.

Illustrated by the author.

Fourth grade reading level.

Houston, James. Eagle Mask: A West Coast Indian Tale. New York: Harcourt, Brace and World, Inc., 1966.

The story opens with Skemshan, a prince of the Eagle Clan and Kaibu, a prince of the Wolf Clan on a strange inlet where they have stayed for two nights, without fire, food or shelter, for the purpose of seeing into the hidden world of familiar spirits. It continues through descriptions of their welcome home, fishing for salmon, an attack by a raiding party, and a potlatch at which a great totem was raised. The story closes with Skemshan learning from his sacred eagle the meaning of the magic words he was not quite sure he had heard as the story opened.

The setting and events described are consistent with authentic information on the Northwest Indians.

About fourth grade reading level.

Hunt, W. Ben. The Golden Book of Indian Crafts and Lore. New York: Simon and Schuster, 1954.

Many questions children and teachers have about Indians and their crafts should be answered in this book.

Middle grade children reading at grade level should have no problem with it.

Inverarity, Robert Bruce. Art of the Northwest Coast Indians. Berkeley: University of California Press, 1967.

This is an informative and well selected collection of illustrations of art objects of the Northwest Pacific Coast Indians.

Children of all levels of reading ability would enjoy the pictures in this book.

James, Harry C. A Day in Oraibi: A Hopi Indian Village. Chicago: Melmont Children's Press, 1959.

A non-Indian boy spends a day at Oraibi, Arizona with two contemporary Hopi Indian children to learn about the oldest village in the U.S. The book is well illustrated, informative, and a story approved by Indians.

About third grade reading level.

James, Harry C. The First Americans. Los Angeles: Elk Grove Press, 1971.

This forty-five page, well illustrated book is addressed to such questions as: Who were the first Americans? When did these people come to America? Why did they come? How do we know about the first Americans? Important artifacts found in the western world, among them "Folsom Points," "Clovis Points" and "Sandra Points," are also discussed.

Fifth grade reading level.

Jenness, Diamond. *The Corn Goddess and Other Tales from Indian Canada. Museum of Canada Bulletin No. 141, Anthropological Series No. 39.* Ottawa: Queen's Printer and Controller of Stationery, 1966.

Mr. Jenness was formerly Chief of the Division of Anthropology at the National Museum of Canada. He is a recognized authority on Indians of Canada.

These tales were selected according to two criteria: (1) literary merit and (2) being representative of every part of Canada so that the reader could gain a conception of the Indian's outlook on the universe around him. The tribes from which the tales were selected were Iroquois, Obibwa, Sarcee, Sekani, Carrier, Coast Salish and Eskimo. Four tales are included from the Coast Salish of the Northwest coast group.

About fifth grade level reading difficulty.

Jenness, Diamond. *The Indians of Canada*. Ottawa, Canada: Roger Duhamel, 1963.

A very good reference for teachers and mature students.

Johanson, Donald C., and Edey, Maitland A. *Lucy, The Beginnings of Humankind*. New York: Simon and Schuster, Inc., 1981. Also condensed in *Reader's Digest* 119 (September, 1981):50-56, 199-234.

An account of the discovery of "Lucy," the oldest, most complete, and best-preserved skeleton of an erect-walking human ancestor ever found.

A fascinating book for mature readers who want to find out about the work of anthropologists (those known as paleoanthropologists) outside of America and at the present time.

Josephy, Alvin M., Jr., ed. *The American Heritage Book of Indians*. New York: American Heritage Publishing Co., Inc., 1961.

Articles which give valuable information from "People of the Dawn" to "Indians of Today."

For the teacher and mature readers.

Khahtsahlana, Chief August Jack, and Charlie, Domanic. *Squamish Legends*. Vancouver: Charles Chamberlain and Frank D. Coan (no date).

The name of the book is indicative of the content.

Kidd, Kenneth E. *Canadians of Long Ago: The Story of Canadian Indians*. New York: Longman's, Green and Co., 1951.

Written by a deputy keeper of ethnology at the Royal Ontario Museum of Archaeology, this little book attempts to describe the various Indian types in the Dominian of Canada as they were just previous to the coming of the Europeans. Food habits, clothes, habitations and social customs are discussed.

One chapter is devoted to the "First Arrivals," one to "Indians of the Northwest Coast," and one to a legend of the Haida Indians, "Bear Mother."

About fourth grade level.

Kirk, Ruth. David, Young Chief of the Quileutes. An American Indian Today. New York: Harcourt, Brace and World, Inc., 1967.

David Hudson, is an eleven year old Quileute Indian boy who has been Chief of his people since he was three years old.

In many ways his life is like that of other American boys his age but there are still remnants of the old culture of the Northwest Pacific Coast in his life.

His village looks much as it did when the white men first came to the Washington coast two hundred years ago. The Quileutes were fishing people then as they are now even though the ways of fishing are changing.

This book shows David at school and at home.

About fourth grade reading level.

Klots, Alexander B., and Klots, Elsie B. The Community of Living Things in the Desert. Mankato, Minn.: Creative Educational Society, Inc., 1956.

What is a desert? Where are the deserts of the world? What causes deserts? Sand and shifting soils, desert winds, and desert floods are some of the questions and topics the authors address.

Fifth grade reading level.

Knight, David C. The First Book of Deserts. New York: Franklin Watts, 1964.

An introduction to the earth's arid lands.

Fifth grade reading level.

La Farge, Oliver. The American Indian. New York: Golden Press, 1956.

This special edition for young readers is filled with the kind of details on Indian home life that children need to know in order to understand culture. It has an archaeological orientation but does not discuss the methods of the archaeologist.

The illustrations are beautiful and numerous.

Fifth grade level readers would have no trouble reading it.

Leavitt, Jerome E. America and Its Indians. New York: Grosset and Dunlap, 1962.

This book is concerned with the details of the daily lives of thirty-six Indian tribes. There is specific information on their environment, subsistence activities, houses, clothes and crafts. Also included are some facts about their political organization, social structure and religious practices. Very good on Indians of the Northwest Coast. Also good information on the Hopis.

Fourth graders reading at grade level should enjoy this book.

Leechman, Douglas. Native Tribes of Canada. Toronto: W. J. Gage and Co., Ltd., 1956.

The Indians of Canada are divided into six cultural areas and each is the subject of one well written, well organized, authentic section of this book. Much detail is given about all aspects of life and a legend of each cultural area is included.

This is an outstanding reference of fifth grade reading level with good illustrations which appear to be taken, in part at least, from museum pieces.

Lisitzky, Gene. Four Ways of Being Human. New York: The Viking Press, 1956.

Chapter IV, in this introduction to anthropology, gives an excellent beginning understanding of Hopi culture. It shows how this culture was created to cope with environmental hardships and to provide a good life.

All fifth grade level readers and above should read this fine reference.

Lovell, Josephine. Morning Star--A Little Pueblo Girl. New York: Platt and Munk Co.

Describes the work of a Pueblo family of the Moki tribe. Very easy book, second or third grade level, and ten pages long.

Lovell, Josephine. Watlala--An Indian of the Northwest. New York: Platt and Munk Co., 1935.

Watlala was a small Indian boy who belonged to the Killamook tribe on the Pacific coast. The book tells about his life.

Second or third grade reading level.

Manning-Sanders, Ruth. Red Indian Folk and Fairy Tales. London: Oxford University Press, 1960.

Folk and fairy tales from different cultural areas are the content of this book. Place clues and food clues make it possible to determine which cultural areas the individual tales belong.

About fifth grade level.

Marriott, Alice. The First Comers: Indians of America's Dawn. New York: Longmans, Green and Co., 1960.

According to the author this is a guidebook about how to play the archaeology game--how to study artifacts in museum cases or look things up in books. The archaeology of North America is used as the subject matter with which to play the game.

Archaeologists are concerned with finding answers to questions about who did what, when, where and how, and if you can find out, why?

In learning to play the game the reader also finds out about the different cultures of those living in North America before history was written down.

An excellent book written at a level fifth grade and above readers could use.

Marriott, Alice Lee. Indians of the Four Corners. New York: Crowell Pub. Co., 1952.

Ancient people in the Southwest who settled where Utah, New Mexico, Arizona and Colorado meet are the subject of this book.

Children with sixth grade reading ability and above will enjoy it most.

Martin, Fran. Nine Tales of Coyote. New York: Harper and Row, 1950.
This interesting book contains nine Indian legends dealing with Coyote, a character common to the folk lore of many Northwestern tribes. It has been approved by Indians. The illustrations are good.
It is about fourth grade reading level.

Martin, Fran. Nine Tales of Raven. New York: Harper and Row, 1951.
The legends in this book are part of the creation cycle passed on from generation to generation by word of mouth. They were told to Miss Martin by Indians. The principal character is Raven, a character common to tales of many Northwestern Pacific Coast Indian tribes.
Indians have approved this book.
It is written at approximately fourth grade reading level.

Mason, Bernard S. Book of Indian Crafts and Costumes. New York: Ronald Press, 1946.
The crafts and costumes of many tribes are included in this book. Use of the index will be necessary to find information on the Northwest Pacific Coast Indians and the Southwest Desert Indians.
About fifth grade reading level.

May, Julian. They Lived in the Ice Age. New York: Holiday House, 1967.
An easy-reading picture book that tells how glaciers were formed and what they did to the land in North America and the sea around it. It also tells what traces we can see today, in addition to telling how the glaciers affected plants, animals and the early nomadic people who came to North America.
Third and fourth grade level readers should have no trouble reading this book. Lovely illustrations are by Jean Zallinger.

McFeat, Tom. Indians of the North Pacific Coast. Toronto: McClelland and Stewart Limited, 1966.
An excellent reference for mature students on the culture of the Northwest Pacific Coast Indians.

McKee, Louise, and Summers, Richard. Dusty Desert Tales. Caldwell, Idaho: The Caxton Printers, Ltd., 1941.
Each tribe among the Indians of the Southwestern desert had its traditional legends of how the earth was made and what powers controlled it. Some of these are hundreds of years old.
Eight tales of the Hopi Indians are given in this book.
Fourth grade reading level.

McNeer, M. Y. The Story of the Southwest. New York: Harper, 1948, (pages unnumbered).
"Land of Pueblos," "Rain Gods" and "The Desert Blooms" are sections pertinent to this unit.
Written for children in grades three to seven.

McNeer, May, and Ward, Lynd. The American Indian Story. New York: Ariel Books, 1963.

This book has good sections on how man came to America and the Indians of the Northwest Pacific Coast.

Children with fifth grade reading ability or above should be able to use it.

Morris, Ann Axtell. Digging in the Southwest. New York: Doubleday Doran, 1933.

Personal stories of evacuations in the Southwest are given in this book.

Junior-high reading level.

Morris, Loverne. The American Indian as Farmer. Chicago: Melmont Publishers, Inc., 1963.

This book has nine stories about Indians working in different sections of the country growing plants to supplement the food they found growing wild. Each story is about the raising of one kind of crop.

"Dry Farming among the Hopi" tells how beans were grown on the edge of a mesa in Arizona by people living in the pueblo Oraibi.

Third grade reading level.

Moyers, William, and Cooke, David C. Famous Indian Tribes. New York: Random House, 1954.

The cultures of the Hopis and the Northwest Pacific Coast Indians are among those covered in this book.

A good reference for children reading at fifth grade level or above.

Nussbaum, Derek. Derek in Mesa Verde. New York: Putnam and Sons, 1926.

Autobiographical story of a boy who helped with excavations of cliff dwellings in the Southwestern part of the United States.

For mature readers--fifth grade and above.

O'Kane, Walter C. The Hopis: Portrait of a Desert People. Norman, Okla.: University of Oklahoma Press, 1953. Reprint 1973.

Children will enjoy the pictures but the book itself is more useful for teachers. It provides a good understanding of what the Hopis are really like.

Parker, Arthur C. The Indian How Book. New York: Doubleday, Doran and Co., Inc., 1941.

A great deal of general information on Indians is given in this book, but many times the specific tribes to which this information refers are not given.

Fifth or sixth grade reading level.

Payne, Elizabeth. Meet the North American Indians. New York: Random House Publishing Company, 1965.

The book has the theme: Indian tribes lived very different lives from one another and how they lived depended on where they lived. Five tribes are discussed in this book. Among them are the Hopi of the Southwest Desert area and the Makah's of the Northwest Pacific Coast.

Third to fourth grade reading level.

Pistorius, Anna. What Indian Is It? Chicago: Follett Publishing Company, 1956.

"What Indians dance the Snake Dance?" and "What Indians were richest?" are questions asked which are answered by reading the sections on "Hopi Indians" and "Northwest Pacific Coast Indians."

The specialized vocabulary raises the reading level to approximately fifth grade.

Province of British Columbia Provincial Archives, Provincial Museum. British Columbia Heritage Series. Series 1 Our Native Peoples. Victoria, B.C.: Dept. of Ed. Division of Curriculum, 1953.

Volume 1	Introduction to Our Native Peoples
Volume 2	Coast Salish
Volume 3	Interior Salish
Volume 4	Haida
Volume 5	Nootka
Volume 6	Tsimshian
Volume 7	Kwakiutl
Volume 8	Kootenay
Volume 9	Déné
Volume 10	Bella Coola

This is an excellent series. The selected bibliographies show many references by ethnographiers, and other authorities in the field. They are in pamphlet form, not very attractive in format but the material is authentic and clearly written. Illustrations are, of course, in black and white and are prints of old photographs, photographs of museum pieces, maps, etc.

While these are recommended for grades seven to twelve by the Department of Education, fifth and sixth graders reading at grade level could use them.

Radin, Paul. The Story of the American Indian. New York: Boni and Liveright, 1927.

Chapter X "From Cliffs to Pueblo" has information on Hopi Indians as well as other Southwestern Desert Indians, and Chapter XIV "The Capitalists of the North" has a fine description of the potlatch, Northwest Pacific Coast art and other facets of the culture.

For mature readers and the teacher.

Running, Corrine. When Coyote Walked the Earth: Indian Tales of the Pacific Northwest. New York: Holt, 1949.
Myths founded on authentic Indian material. Fourth graders and above should be able to read these stories.

Scheele, William E. The Earliest Americans. New York: World Publishing Co., 1963.
Although this is a small book--only fifty-nine pages--it gives a good account of what archaeologists knew about the earliest Americans up to 1963. It points out that Sandia cave men are the earliest known Americans and that they lived 26,000 years ago.
The author is director of the Natural Science Museum of Canada.
About fifth grade reading level.

Scheele, William E. The Mound Builders. New York: World Publishing Company, 1960.
A description of what archaeologists found in some of the mounds. Page seventeen shows a cross section of the Great Serpent Mound.
Students will need fifth grade level reading ability to read this easily.

Shannon, Terry. Tyee's Totem Pole. Chicago: Albert Whitman and Co., 1955.
A story of how Tyee, a Haida Indian boy, learns the art of carving and after an exciting struggle catches the first salmon of the run and earns the right to carve his own totem pole.
About third grade reading level.

Shannon, Terry. Little Wolf, The Rain Dancer. Chicago: Albert Whitman and Company, 1954.
For children in grades three to five.

Siebert, Erna, and Werner, Forman. North American Indian Art. London: Paul Hamlyn, Ltd., 1967.
A beautiful, fascinating book with one hundred three large color plates and thirty-five black and white illustrations from museum pieces. It is mainly concerned with the art work of Tlinget tribes. It has illustrations of masks, ceremonial head dresses, rattles and decorative objects for everyday use.

Silverberg, Robert. Home of the Red Man: Indian North America before Columbus. Greenwich, Conn.: New York Graphic Society, 1963.
This book is based on archaeological evidence for the pre-history era but it does not discuss in detail how the archaeologist works even though dating is briefly described. It answers such questions about Indians as Who were they? Where did they come from? How did they live? What language did they speak?
It is a smooth flowing story that fifth grade level readers should read without difficulty.

Stirling, Matthew W. Indians of North America: A Historical Panorama. Washington, D.C.: The National Geographic Society, 1955.

A comprehensive account with many full color pictures.

It is especially fine on trade, units of exchange, wealth, the social system, inheritance lines, and marriage of the Northwest Pacific Coast Indians.

A good reference for the teacher and mature readers.

Stirling, Matthew W. Indians of the Americas. Washington, D.C.: National Geographic Society, 1955.

A fine account is given of the prehistory of the Northwest Pacific Coast Indians. All aspects of their culture are included. Also includes a few scattered pages on the Hopi Indians.

Only the most mature readers would be able to use this book.

Thornton, Mildred Valley. Indian Lives and Legends. Vancouver: Mitchell Press Limited, 1966.

Mrs. Thornton is an artist as well as an author. She has painted Indians from the Yukon to the U.S. border, from the West Coast of Vancouver Island to the Kootenays. While painting these people she talked with them and obtained much valuable information first-hand. At the earliest opportunity she wrote it down.

This book is made up of these writings and some of the portraits she painted. They are much as she first recorded them although many of the people who told her the stories, or are the ones she is writing about, are dead.

It is a nice book. It gives a great deal about the personal lives of people--real people she knew.

Mature fifth graders could read it. The teacher would enjoy it.

Tunis, Edwin. Indians. New York: World Publishing Co., 1959.

The Indian was "simply a human being, living his own special kind of life, and his acts were consistent with his knowledge, his traditions and his environment," is the theme of this very excellent book.

All aspects of life are covered for nine different groups of Indians. Only their myths are omitted. Many details of their life, seldom found in books, are given.

Fifth grade level readers could use it even though the print is small. Also a good source book for the teacher.

Underhill, Ruth M. Indians of the Pacific Northwest. Washington, D.C.: U.S. Department of the Interior, Bureau of Indian Affairs, Branch of Education, 1944.

This book discusses the Indians of the coast of Washington and Oregon. But the way of life for the Indians who lived on the western shelf of North America beyond the Cascade Mountains in the United States and the Canadian Rockies in British Columbia was much the same. They shared the same culture. The abundance of information on all aspects of life has been brought together from many scattered scientific publications.

It is written in a clear, readable style. Children with fifth grade reading ability should not have trouble using it.

Underhill, Ruth M. First Came the Family. New York: William Morrow and Co., 1958. Illustrated by Arminta Neal.

This is an introductory study of family life in various societies. The book is simply written and describes not only what is different but what is similar in the families of the human race and points out our own rich inheritance from the past.

Fifth grade reading level.

Underhill, Ruth Murray. Beaverbird: A Story of Indians on the Coast of Washington Before the Coming of the Whites. New York: Coward McCann, 1959.

Beaverbird was almost twelve years old in 1760 when he was captured by the slave raiders. It was the beginning of a new way of life for him--away from his people, the Kalapuyas.

Fourth or fifth grade reading level.

Uprichard, Muriel. ". . . Three Little Indians." Toronto: The Copp Clark Co., Limited. (No date of publication.)

One of the little Indians is from the Haida tribe, one from the Blackfoot Indian tribe and one from the Huron tribe. Each story incorporates much about the tribe.

A Canadian Social Studies Unit Reader of third grade level.

Vlahos, Olivia. New World Beginnings: Indian Cultures in the Americas. New York: Viking Press, 1970.

A chronicle of representative groups of Indians in the Americas before their discovery by the Europeans. The Kwakiutls represent the fishermen and the Hopis the farmers. The social and political organization of each group, their crafts, arts and religion are traced back to their possible origins.

A very interesting book, with fine illustrations by George Ford.

For children with fifth grade reading ability or above and the teacher.

Washburn, Wilcomb E. The Indian in America. New York: Harper and Row, 1975.

Chapter one provides a good discussion of origins of the American Indian.

Teachers would find a wealth of information in this book. Mature readers could read some parts with understanding.

Waters, Frank. Book of the Hopi. New York: The Viking Press, 1963.

These stories were taken down in Hopi on a tape recorder by White Bear, who later with the aid of his wife translated them into English. It is a history of the Hopi people and their religious beliefs--an expression by Hopis of the traditional viewpoint.

The myths and legends included have been preserved for generations by word of mouth.

Children can get much information from the pictures but only mature readers could read it. Excellent source for the teacher.

Wherry, Joseph H. *The Totem Pole Indians*. New York: Wilfred Funk, Inc., 1964.

The Totem Pole Indians explores the history, social organization, craft culture, principal traditions, myths and legends.

The making, meaning, and purposes of totem poles, which were status symbols as well as a way of recording personal and tribal history and events of importance, are given much emphasis.

Well illustrated and an excellent book.

Fifth grade reading level.

White, Anne Terry. *All About Archaeology*. New York: Random House, 1959.

Chapter I tells about the Negro cowboy who found the first Folsom points and how Dr. Figgins dug a new page of history out of the earth.

Chapters II and III discuss the work of archaeologists.

Other chapters tell about specific archaeological finds.

Children reading at grade five level and above should be able to read this.

White, Anne Terry. *Pre-historic America*. New York: Random House, 1951.

Fifth graders should enjoy this factual book describing the first animals and men of the Americas. It tells where the skeletal remains of these animals and men may be found, as well as how the Indians came to the Americas and how they lived.

Wolf, Peter Gray. *Gray Wolf Stories: Indian Mystery Tales*. Caldwell, Idaho: The Caxton Printers, Ltd., 1946.

The folk stories, in this volume, relate the wonders of the great forests, the mysterious events of a dim past, and the strange life of a world in which every animal, plant and object could talk.

These tales were gathered from the scattered Indian tribes of America. The Hopi Indians are not represented but the Northwest Pacific Coast Indians are represented by stories from the Salish tribe.

Fourth grade reading level.

Worthylake, Mary M. *Moolack: Young Salmon Fisherman*. Chicago: Melmont Publishers, 1963.

An easy book about everyday life of a Northwest Coast Indian family.

Third grade level.

Zim, Herbert S., and Dodge, Natt N. The Pacific Northwest. A Guide to the Evergreen Playground. New York: The Golden Press, 1959.

Excellent for giving children a feeling for the Pacific Northwest.

Children reading at fifth grade level should be able to use it.

Zim, Herbert S. The Southwest. New York: The Golden Press, 1959.

A good book for describing the land where the Hopi and other Indian tribes lived.

About fifth grade reading level.

Reference Books for Teachers

Barbeau, Marius. Tsimsyan Myths. Ottawa: Roger Duhamel, F.R.S.C. Queen's Printer and Controller of Stationery, 1961.

These are traditional narratives recorded from Tsimsyan Indians. Elders in the tribes have been the sources of this inherited knowledge.

The teacher should read these tales before she makes a decision about putting the book on the reading list of a particular group of pre-adolescents she is working with.

Good source material for the teacher.

Barbeau, Marius. Totem Poles. Bulletin No. 119, Vol. II Totem Poles According to Location. Anthropological Series No. 30. Ottawa, Canada: Roger Duhamel F.R.S.C. Queen's Printer and Controller of Stationery, 1964.

The subtitle "Totem Poles According to Location" is very descriptive of the content. Some original documents in the form of accounts given by various people about certain totem poles are included. It is very complete. For mature readers and teacher.

Boaz, Franz. Kwakiutl Ethnography. Chicago: University of Chicago Press, 1966.

A reference for the teacher who is interested in an in-depth study of the Kwakiutl culture. It is explored in detail.

Burland, Cottie. North American Indian Mythology. London: Paul Hamlyn Limited, 1965.

An excellent book for the teacher and mature readers. Not only does it deal with the archetypal gods, the Power Above, the Earth Mother and the Trickster but also with other spirits--the animal souls and the spirits of plants for example. Good accounts of the way of life of the various cultural divisions are given so that the relation between the myths and the cultures from which they arose are evident.

The illustrations are authentic--coming from museum exhibits. Some are in color.

Curtis, Edward S. The North American Indian. New York: Johnson Reprint Corporation.

There are twenty volumes in this series picturing and describing the Indians of the United States, Canada, and Alaska.

The twelfth volume which was published in 1922, is devoted to a study of the Hopi Indians: physical characteristics of the land, general description of the Hopis, clan legends, religion, ceremonies, tradition and mythology, villages, agriculture, etc. The illustrations are excellent.

The eleventh volume was published in 1916 and includes: a general description of the Nootka and Haida Indians of the Northwest Pacific Coast, warfare, sociology, winter ceremonies, mythology, villages, etc. The illustrations are as informative as the text.

Both volumes give a comprehensive coverage of the culture(s) they deal with.

A fine reference for the teacher.

Driver, Harold Edwon. Indians of North America. Chicago, Illinois: University of Chicago Press, 1961.

Teachers and mature readers adept at using the index will find a wealth of material on both Hopi and Northwest Pacific Coast Indian cultures.

Drucker, Philip. Cultures of the North Pacific Coast. San Francisco: Chandler Publishing Co., 1965.

A description of the operations of kinship and social class, the winter dances, the potlatch and other aspects of the culture of the Northwest Pacific Coast Indians.

Excellent for the teacher. Mature readers could also use it.

Drucker, Philip. Indians of the Northwest Pacific Coast. Garden City, New York: The Natural History Press, 1963.

The land, the people, and prehistory of the Northwest Pacific Coast area are described, and then the culture--social structures, marriage customs, economy and technology, religion, rituals, art, wars, and feuds--is considered.

A must for the teacher.

Farb, Peter. Man's Rise to Civilization as Shown by the Indians of North America. New York: E. P. Dutton and Co., Inc., 1968.

Illustrates the cultural evolutionary theory which basically deals with the rise of complexity, whether of the movement from simple to complex biological organisms or simple to complex cultures, as it applies to the North American Indians.

Well written and easily understood. Excellent for teachers.

Fletcher, Sydney E. The American Indian. New York: Grosset and Dunlap, 1954.

Good reference book for mature readers and the teacher.

Hays, Hoffman Reynolds. Children of the Raven: The Seven Indian Nations of the Northwest Coast. Hightstown, New Jersey: McGraw Hill Book Company, 1975.

"Section II The Culture" is an excellent source of information about these seven groups of people who differed somewhat in physical characteristics and language but whose way of life was basically similar.

All areas of the culture are considered including several tales and many pictures of art products.

Excellent for background reading.

Holm, Bill. Northwest Coast Indian Art. Seattle: University of Washington Press, 1965.

A book for the teacher who is interested in the analysis of form of Northwest Pacific Coast Indian Art.

Holm, Bill. Crooked Beak of Heaven: Masks and Other Ceremonial Art of the Northwest Coast. Seattle: University of Washington Press, 1972.

A catalogue of the Sidney Gerber Memorial Collection of Northwest Indian Art in the Thomas Burke Memorial Washington State Museum.

The pictures are in black and white, but are beautiful.

A good reference for the teacher. Children will enjoy the pictures.

Jenness, Diamond. The Indians of Canada. 6th ed. National Museum of Canada Bulletin 65, Anthropological Series No. 15. Ottawa: Roger Duhamel, F.R.S.C., 1963.

Excellent source material for the teacher and very mature readers. The book is well indexed and the Table of Contents is very helpful.

Josephy, Alvin, M., Jr., ed. The American Heritage Book of Indians. New York: American Heritage Publishing Co., Inc., 1961.

The articles selected for this volume will provide much information for the teacher and mature readers.

Lisitzky, Gene. Four Ways of Being Human. New York: The Viking Press, 1956.

The Introduction and Chapter IV should be required reading for the teacher and mature readers seeking an understanding of the Hopi culture.

Matthews, Downs. "Reproducing Alaska's Aboriginal Art." The Humble Way 11 (First Quarter 1972):2-7.

An article describing a project to teach young people of the Tlingit Indians of the Alaskan Coast their artistic heritage.

Beautiful colored pictures of the masks these young people and native artists have made.

McFeat, Tom. Indians of the North Pacific Coast. Toronto: McClelland and Stewart Limited, 1966.

A must for teachers and a fine reference for mature students.

Michaelis, John U., and Johnston, A. Montgomery. The Social Sciences: Foundation of the Social Studies. Boston: Allyn and Bacon, Inc., 1965.

Chapter VI, Anthropology, written by Alfred K. Guthe can give teachers and curriculum specialists a deeper understanding of the nature of anthropology--the questions it asks, the concepts and generalizations it deals with, the methods of inquiry and the way it organizes its findings. Such questions along with others should be considered before decisions are made which deal with methodological and substantive aspects of the social studies curriculum.

I would wish that every teacher would study this before teaching the unit.

O'Kane, Walter C. The Hopis: Portrait of a Desert People. Norman, Oklahoma: University of Oklahoma Press, 1953. Reprint 1973.

This book will provide a good understanding of what the Hopi Indians are really like.

Province of British Columbia Provincial Archives, Provincial Museum. British Columbia Heritage Series. Series II Our Pioneers. Victoria, British Columbia: Department of Education, Division of Curriculum, 1953.

Volume I Queen Charlotte Islands.

Discusses the early visits of white men to the Queen Charlotte Islands, the Maritime Fur Traders, the era of Hudson's Bay Company, the Colonial Period, Church Missions on the Islands and Industrial Development.

Gives a good background of trade relations and practices.

Pelto, Pertti J. The Nature of Anthropology. Columbus, Ohio: Charles E. Merrill Books, Inc., 1966.

Basic knowledge about the "discipline of anthropology and its relationship to modern technological and humanistic endeavors" is clearly and interestingly presented in this small eighty-two page volume.

Radin, Paul. The Story of the American Indian. New York: Boni and Liveright, 1927.

Chapter X "From Cliffs to Pueblo" has information on Hopi Indians as well as other Southwestern Desert Indians, and Chapter XIV "The Capitalists of the North" has a fine description of the potlatch, Northwest Pacific Coast art, and other facets of the culture.

A good reference for the teacher.

Spencer, Robert F.; Jennings, Jesse D.; et al. *The Native Americans*. New York: Harper and Row, 1965.

This book includes good material on archaeology and Indians of the Northwest Coast. A general discussion of Indians of the Southwest is also included but very little is given about the Hopi Indians as a distinct group.

A good reference for teachers.

Stirling, Matthew W. *Indians of North America: A Historical Panorama*. Washington, D.C.: The National Geographic Society, 1955.

A comprehensive account with many full color pictures.

It is especially helpful on trade, units of exchange, wealth, the social system, inheritance laws, and marriage of the Northwest Pacific Coast Indians.

A good reference for the teacher and mature readers.

Tunis, Edwin. *Indians*. New York: World Publishing Company, 1959.

A good source book for the teacher and mature readers.

Underhill, Ruth. *Red Man's America: A History of the Indians of the United States*. Chicago: University of Chicago Press, 1953.

Information about the Hopi Indians and the tribes of the Pacific Northwest from Northern California to the Canadian Border.

Vlahos, Olivia. *New World Beginnings: Indian Cultures in the Americas*. New York: Viking Press, 1970.

A chronicle of representative groups of Indians in the Americas before their discovery by the Europeans. The Kwakiutls represent the fishermen and the Hopis the farmers. The social and political organization of each group, their crafts, arts, and religion are traced back to their possible origin. George Ford's illustrations are very fine.

A worthwhile book for the teacher to read.

Waters, Frank. *Book of the Hopi*. New York: The Viking Press, 1963.

These stories were taken down in Hopi on a tape recorder by White Bear, who later with the aid of his wife translated them into English. It is a history of the Hopi people and their religious beliefs--an expression by Hopis of the traditional viewpoint.

These myths and legends included have been preserved for generations by word of mouth.

For the teacher and mature readers.

Yava, Albert. *Big Falling Snow*. New York: Crown Publishers, 1978.

The author recounts a Tewa-Hopi Indian's life and the history and traditions of his people. He tells the creation myth (p. 38) and includes three Tewa-Hopi songs and two short stories in the Appendix.

For teachers.

Audio Visual Materials

Films

Ancient Earth. University of Pennsylvania.
Anthropologists at work.

Betatakin. Archaeological Institute of America.
An ancient cliff dwelling in Arizona.

Glimpses of the Past. Indiana University.
How archaeologists put together the story of the past.

The Hopi Indian. Coronet.
Hopi Indians pursuing their work and participating in ceremonies.

Hopi Indian Arts and Crafts. Coronet.
Use of materials in their environment for useful and beautiful objects.

Hopi Kachinas. ACI Productions.
"A study in depth of an Indian tribe's religion with interwoven cultural overtones. The rituals are expressed through spiritual dances. Kachina dolls, little wooden images of the dancers, are made for Hopi children as representations of various supernatural spirits."

Hopi Snake Dance. Informational Materials Incorporated.
Preparation, handling of snakes, costumes, and a part of the dance are shown.

Indian Art of the Pueblos. Encyclopedia Britannica Education Corporation.
Use of art in ceremonial and work life of the Pueblos.

Indians of the Southwest. CCM Film Incorporated.
Shows homes, work, ceremonies, and other aspects of life. It is part of the series Our Land, Our People USA.

The Loon's Necklace. Crawley Films Limited.
Masks made and used by Indians of British Columbia.

Making a Mask. International Film Bureau.
How to make papier mache masks.

Peaceful Ones (Hopis). Informational Materials, Inc.
Their homes, work, ceremonies.

Point of Pines. Archaeological Institute of America.
Shows how archaeology students dug in a Pueblo ruin.

Tribe of Turquoise Waters. Avalon Daggett Producers.
Story of present day Indians who live in the Grand Canyon and of the prehistoric people who lived there first.

Filmstrip

Indians of the Northwest Pacific Coast. Society for Visual Education Inc.
Northwest Pacific Coast Indians pursuing their every day activities.

Three Dimension View Master Slides

Indians of the Southwest. DEMCO Education Corporation.
Life activities of the Southwest Indians.

Transparencies

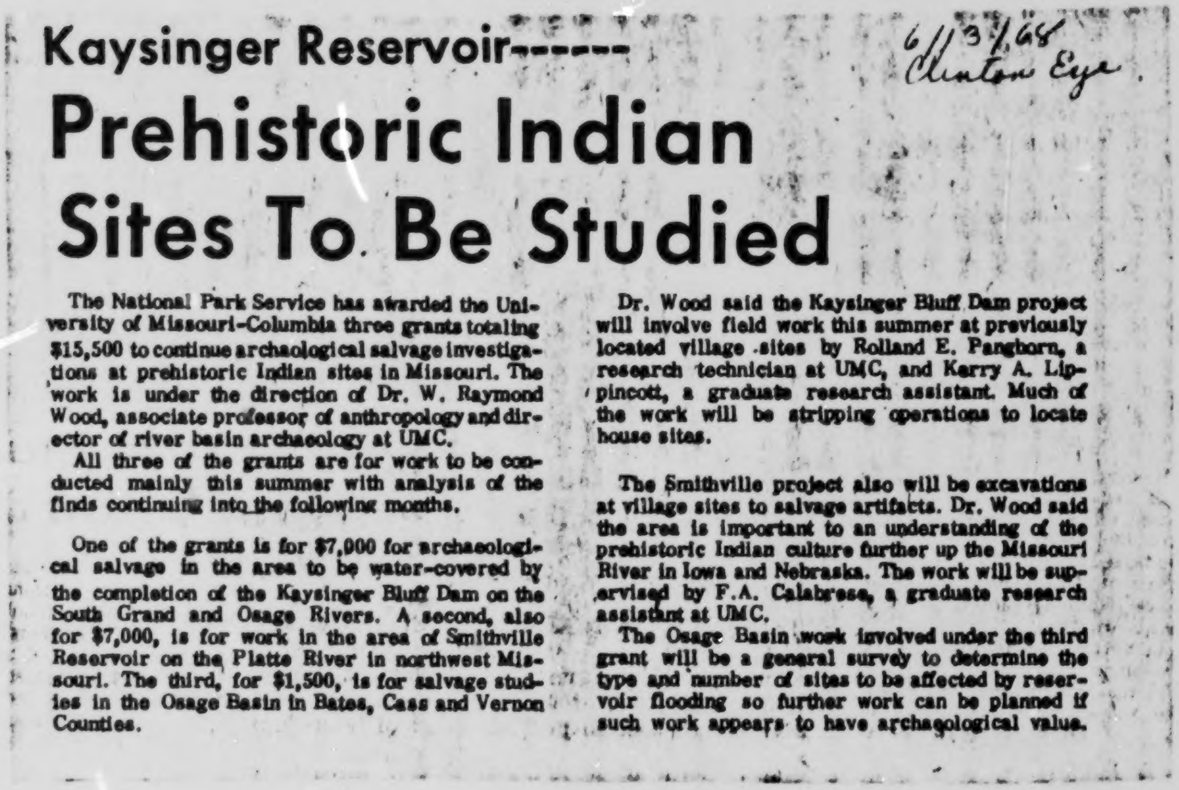
How We Learn about Ancient and Prehistoric Man. DEMCO Education Corp.
Anthropologists at work.

APPENDIX A

Supplemental Material for Developing Section One of Sequence of Learning Experiences

Appendix A No. 1

Accounts of Archaeological Findings in Missouri



6/13/68
Clinton Eye

Kaysinger Reservoir------

Prehistoric Indian Sites To Be Studied

The National Park Service has awarded the University of Missouri-Columbia three grants totaling $15,500 to continue archaological salvage investigations at prehistoric Indian sites in Missouri. The work is under the direction of Dr. W. Raymond Wood, associate professor of anthropology and director of river basin archaeology at UMC.

All three of the grants are for work to be conducted mainly this summer with analysis of the finds continuing into the following months.

One of the grants is for $7,000 for archaeological salvage in the area to be water-covered by the completion of the Kaysinger Bluff Dam on the South Grand and Osage Rivers. A second, also for $7,000, is for work in the area of Smithville Reservoir on the Platte River in northwest Missouri. The third, for $1,500, is for salvage studies in the Osage Basin in Bates, Cass and Vernon Counties.

Dr. Wood said the Kaysinger Bluff Dam project will involve field work this summer at previously located village sites by Rolland E. Pangborn, a research technician at UMC, and Kerry A. Lippincott, a graduate research assistant. Much of the work will be stripping operations to locate house sites.

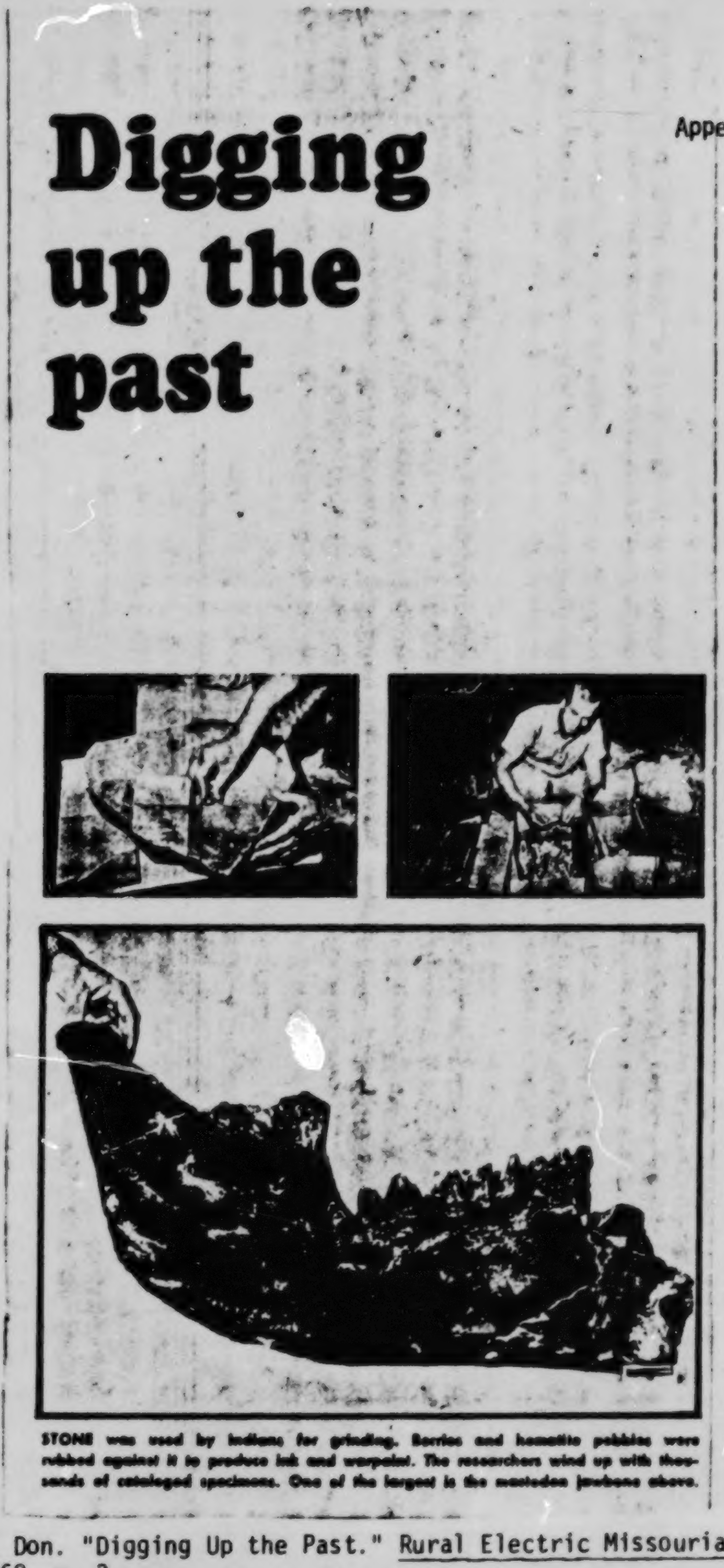
The Smithville project also will be excavations at village sites to salvage artifacts. Dr. Wood said the area is important to an understanding of the prehistoric Indian culture further up the Missouri River in Iowa and Nebraska. The work will be supervised by F.A. Calabrese, a graduate research assistant at UMC.

The Osage Basin work involved under the third grant will be a general survey to determine the type and number of sites to be affected by reservoir flooding so further work can be planned if such work appears to have archaeological value.

The Clinton Eye

13 June 1968

Appendix A No. 1



Digging up the past

STONE was used by Indians for grinding. Berries and hematite pebbles were rubbed against it to produce ink and warpaint. The researchers wind up with thousands of cataloged specimens. One of the largest is the mastodon jawbone above.

Yoest, Don. "Digging Up the Past." Rural Electric Missourian, October 1968, p. 3.

Appendix A No. 1

Yoest, Don. "Digging Up the Past." Rural Electric Missourian, October 1968, p. 1.

Yoest, Don. "Digging Up the Past." Rural Electric Missourian, October 1968, p. 3.

Digging Up the Past

By Don Yoest

The word got out and then the news spread. It spread like wildfire! Several mastodons were found in the Pomme de Terre river bottoms near Avery.

It is about halfway between Sedalia and Springfield, and several miles west of highway 65.

This group of animals which closely resemble elephants in size, with long hair like a buffalo's, was feeding on the marsh grass and lush foliage.

The sightseers came singly, in pairs, trios and larger groups to look at these prehistoric monsters.

They were not disappointed. The team of archaeologists from the University of Missouri at Columbia, UMC, and other colleges found time to let the curious have a look.

They theorized the large animals were grazing on the prolific bottomland and wandered into the quicksand-like bog 25,000 years ago. They became mired in the soft ground and were unable to move on.

Productive underground springs kept the sandy peatish ground wet. The same peat in the soil which led to their downfall, also helped preserve the mastodons for us.

After their 25,000-year sleep the mastodons were still at the bog. At least enough of the bones and tusks remained for the scientists to number the herd and obtain valuable artifacts of both flora and fauna of a day long gone.

The bog is on a farm owned by the Trolinger family served by Southwest Electric Cooperative, Bolivar. The bog has been appropriately designated as Trolinger bog.

Meanwhile, on the other side of the river, about two miles away, another dig-in was progressing with an air of feverish activity.

More mastodons? No, but perhaps descendents of the early mastodon hunters. On the Rodgers farm a large rock overhang on a bluff created a natural shelter.

Rodgers Shelter, as it is known to the archaeologists, was the camping spot for many early Indians. By carefully removing the preserving dirt which covers the Indian artifacts, many tools and weapons are found.

Generally, the deeper they dig, the older the items found, say the scientists. Some of the relics removed from the Rodgers Shelter site appear to have been deposited around 8,000 B.C.

How does a research team go about gleaning valuable scientific knowledge of history from a pile of bones? Do they dig for large tusks and perfect arrowheads?

The answers are a bit surprising. When we see a large mastodon bone about the size of a man's leg protruding from a wall of dirt it seems a rare find.

Our first impulse is to dig out the trophy. Not so with these dedicated men. Rolland Pangborn, research technician with the UMC says: "We could start a bonemeal plant here when we get done.

"The specimens go to museums and schools, but the valuable find is in knowledge of the area and its history. Each excavation is painstakingly mapped and everything removed is carefully cataloged."

How do these careful records stack up? Mighty high. There are tons of specimens and just about as many pounds of records in the field office.

After a very careful removal by hand from the sites, the dirt is then screened through a quarter-inch mesh to recover small articles.

In important areas of excavation, this screened dirt is sacked and saved. It will be sifted through even finer screens at MU this winter.

Just thinking about all that digging and sifting can give you a backache. To provide enough man and woman power, students are hired for the summer digging sessions.

R. Bruce McMillan, a research associate in anthropology at UMC is in charge of the Rodgers Shelter Excavation. He says: "We have had a good summer here.

"The local folks have been real good to us and our student helpers have learned a lot about archaeology and southwest Missouri.

"This area will be flooded when Kaysinger dam is completed. That's why we are trying to learn as much about it as we can. So far, it looks like one of the longest and clearest single cultural sequences of prehistoric Indians discovered in the state.

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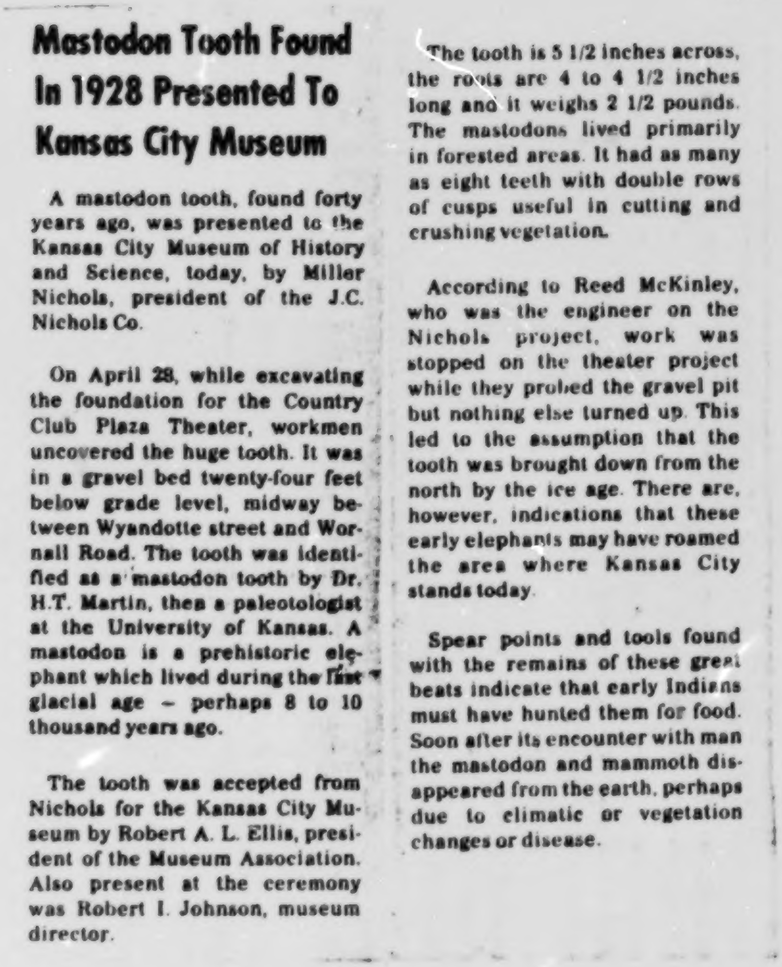
Yoest, Don. "Digging Up the Past." Rural Electric Missourian, October 1968, p. 3.

Appendix A No. 1



Mastodon Tooth Found In 1928 Presented To Kansas City Museum

A mastodon tooth, found forty years ago, was presented to the Kansas City Museum of History and Science, today, by Miller Nichols, president of the J.C. Nichols Co.

On April 28, while excavating the foundation for the Country Club Plaza Theater, workmen uncovered the huge tooth. It was in a gravel bed twenty-four feet below grade level, midway between Wyandotte street and Wornall Road. The tooth was identified as a mastodon tooth by Dr. H.T. Martin, then a paleotologist at the University of Kansas. A mastodon is a prehistoric elephant which lived during the last glacial age – perhaps 8 to 10 thousand years ago.

The tooth was accepted from Nichols for the Kansas City Museum by Robert A. L. Ellis, president of the Museum Association. Also present at the ceremony was Robert I. Johnson, museum director.

The tooth is 5 1/2 inches across, the roots are 4 to 4 1/2 inches long and it weighs 2 1/2 pounds. The mastodons lived primarily in forested areas. It had as many as eight teeth with double rows of cusps useful in cutting and crushing vegetation.

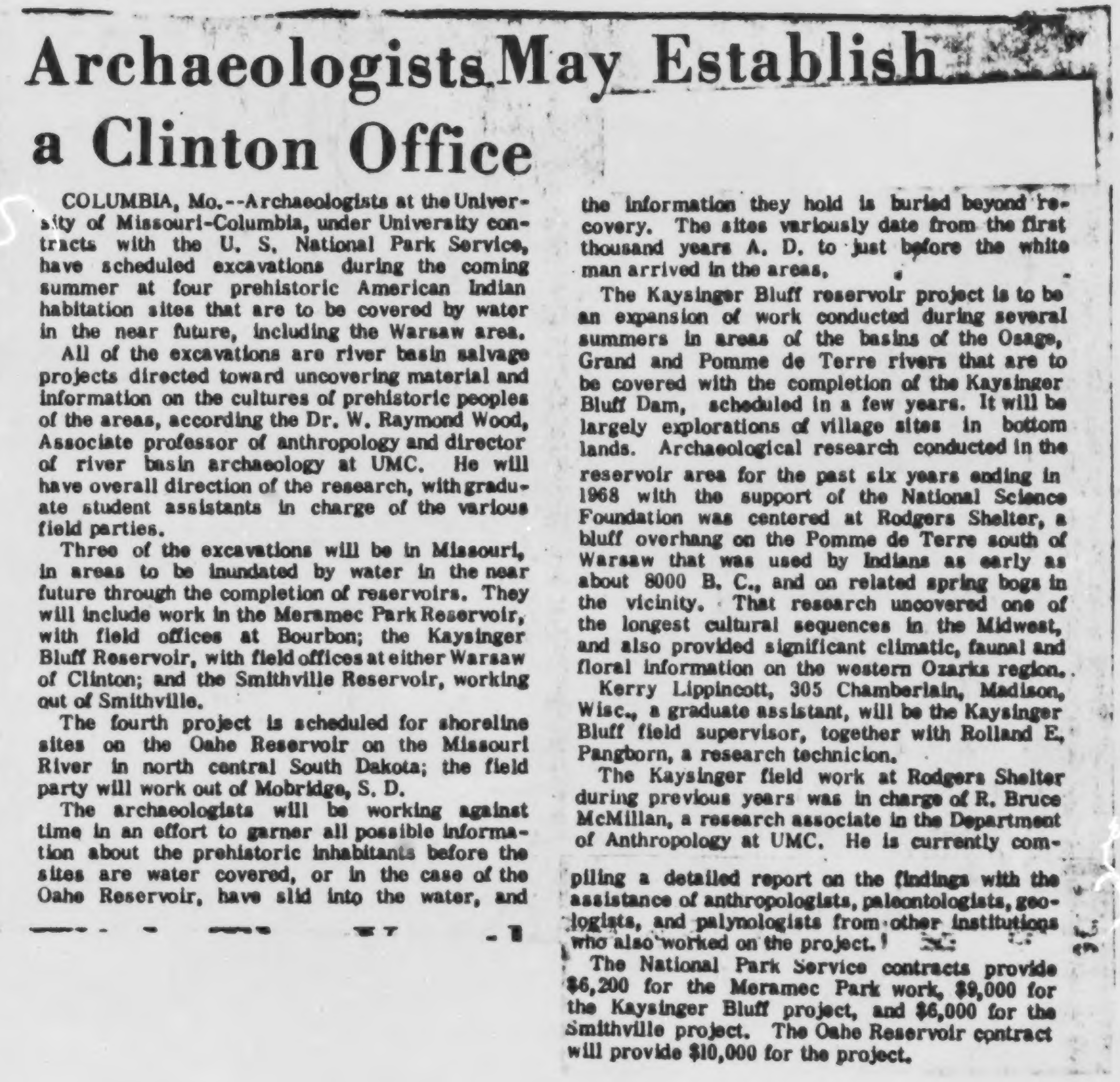
According to Reed McKinley, who was the engineer on the Nichols project, work was stopped on the theater project while they probed the gravel pit but nothing else turned up. This led to the assumption that the tooth was brought down from the north by the ice age. There are, however, indications that these early elephants may have roamed the area where Kansas City stands today.

Spear points and tools found with the remains of these great beats indicate that early Indians must have hunted them for food. Soon after its encounter with man the mastodon and mammoth disappeared from the earth, perhaps due to climatic or vegetation changes or disease.

Wednesday Magazine

February 12, 1969

Appendix A No. 1



Archaeologists May Establish a Clinton Office

COLUMBIA, Mo.--Archaeologists at the University of Missouri-Columbia, under University contracts with the U. S. National Park Service, have scheduled excavations during the coming summer at four prehistoric American Indian habitation sites that are to be covered by water in the near future, including the Warsaw area.

All of the excavations are river basin salvage projects directed toward uncovering material and information on the cultures of prehistoric peoples of the areas, according the Dr. W. Raymond Wood, Associate professor of anthropology and director of river basin archaeology at UMC. He will have overall direction of the research, with graduate student assistants in charge of the various field parties.

Three of the excavations will be in Missouri, in areas to be inundated by water in the near future through the completion of reservoirs. They will include work in the Meramec Park Reservoir, with field offices at Bourbon; the Kaysinger Bluff Reservoir, with field offices at either Warsaw of Clinton; and the Smithville Reservoir, working out of Smithville.

The fourth project is scheduled for shoreline sites on the Oahe Reservoir on the Missouri River in north central South Dakota; the field party will work out of Mobridge, S. D.

The archaeologists will be working against time in an effort to garner all possible information about the prehistoric inhabitants before the sites are water covered, or in the case of the Oahe Reservoir, have slid into the water, and the information they hold is buried beyond recovery. The sites variously date from the first thousand years A. D. to just before the white man arrived in the areas.

The Kaysinger Bluff reservoir project is to be an expansion of work conducted during several summers in areas of the basins of the Osage, Grand and Pomme de Terre rivers that are to be covered with the completion of the Kaysinger Bluff Dam, scheduled in a few years. It will be largely explorations of village sites in bottom lands. Archaeological research conducted in the reservoir area for the past six years ending in 1968 with the support of the National Science Foundation was centered at Rodgers Shelter, a bluff overhang on the Pomme de Terre south of Warsaw that was used by Indians as early as about 8000 B. C., and on related spring bogs in the vicinity. That research uncovered one of the longest cultural sequences in the Midwest, and also provided significant climatic, faunal and floral information on the western Ozarks region.

Kerry Lippincott, 305 Chamberlain, Madison, Wisc., a graduate assistant, will be the Kaysinger Bluff field supervisor, together with Rolland E. Pangborn, a research technicion.

The Kaysinger field work at Rodgers Shelter during previous years was in charge of R. Bruce McMillan, a research associate in the Department of Anthropology at UMC. He is currently compiling a detailed report on the findings with the assistance of anthropologists, paleontologists, geologists, and palynologists from other institutions who also worked on the project.

The National Park Service contracts provide $6,200 for the Meramec Park work, $9,000 for the Kaysinger Bluff project, and $6,000 for the Smithville project. The Oahe Reservoir contract will provide $10,000 for the project.

The Clinton Eye

19 June 1969

Appendix A No. 1

Indian Village Is Being Uncovered

By John Walicsek
(A Member of The Star's Staff)

More than 2,000 years ago the Hopewell Indians lived in the first urban development in the Kansas City area. When they left, they left behind much evidence of their culture.

It was a land of lush vegetation, where buffalo, elk and whitetail deer roamed, and it is here where a group of 20 students of the Great Plains Archaeological field school are concentrating their efforts to piece together a forgotten part of history.

Dr. Alfred Johnson, of the University of Kansas anthropology department, is in charge of the field study being conducted within the 80-acre Line Creek park at Northwest Waukomis drive and Englewood road in Platte County. It is owned by the Kansas City park and recreation department.

The site, he said, was acquired to preserve for excavation what may be the last—and best preserved—Hopewell Indian village within the United States.

* * * * *

THE DEISTER ARCHAEOLOGICAL site—the technical name for the excavation—had been under observation for 36 years, after J. Mett Shippee, a Kansas City archaeologist, discovered the area while he was on a picnic there in 1933.

Shippee, who lives at 3622 Russell road, North, said the village in Line Creek park is seemingly the last large one that remains in the corporate limits of Kansas City.

Urban progress, however, threatened to destroy the historic area when bulldozers, excavating for a sewer line, cut through part of the village.

"Before the acquisition of the land, the village was drastically damaged by the construction of a large trunk sewer in the Line creek valley," Shippee said. "Through a series of quite remarkable coincidences, and the effort of one woman—Mrs. Gerald Gorman, 901 Northeast Vivion road—the Kansas City Park and Recreation commission was able to acquire the 80-acre tract of which the village, extending over six acres, must have been the most desirable location."

* * * * *

SHIPPEE SAID THAT many Hopewell Indian village sites have been discovered inside Kansas City's boundaries in northeast Jackson County.

"They are known to have been at Ninth street and Woodland avenue, Twelfth street and Woodland, Thirteenth street and the Paseo, North Terrace Park and on east along the southern slopes from the Missouri River bluffs in Jackson, Lafayette, Saline and Cooper Counties," he said.

"Their village sites," he added, "have been revealed by cultivation and construction work. And on the hills and ridges, the remains of burial mounds are an indication of the survival of the burial cult in a quite minimal form."

The Hopewell culture, according to Shippee, is known to have flourished from 200 B. C. to 200 A. D. Tests made on the artifacts at Line creek indicate the Indian culture flourished there about 70 B. C.

* * *

SHIPPEE HAS PERFORMED exploratory excavations at the Line creek site that have uncovered the remains of 14 refuse pits and a large hearth—either used for cooking or a funeral pyre.

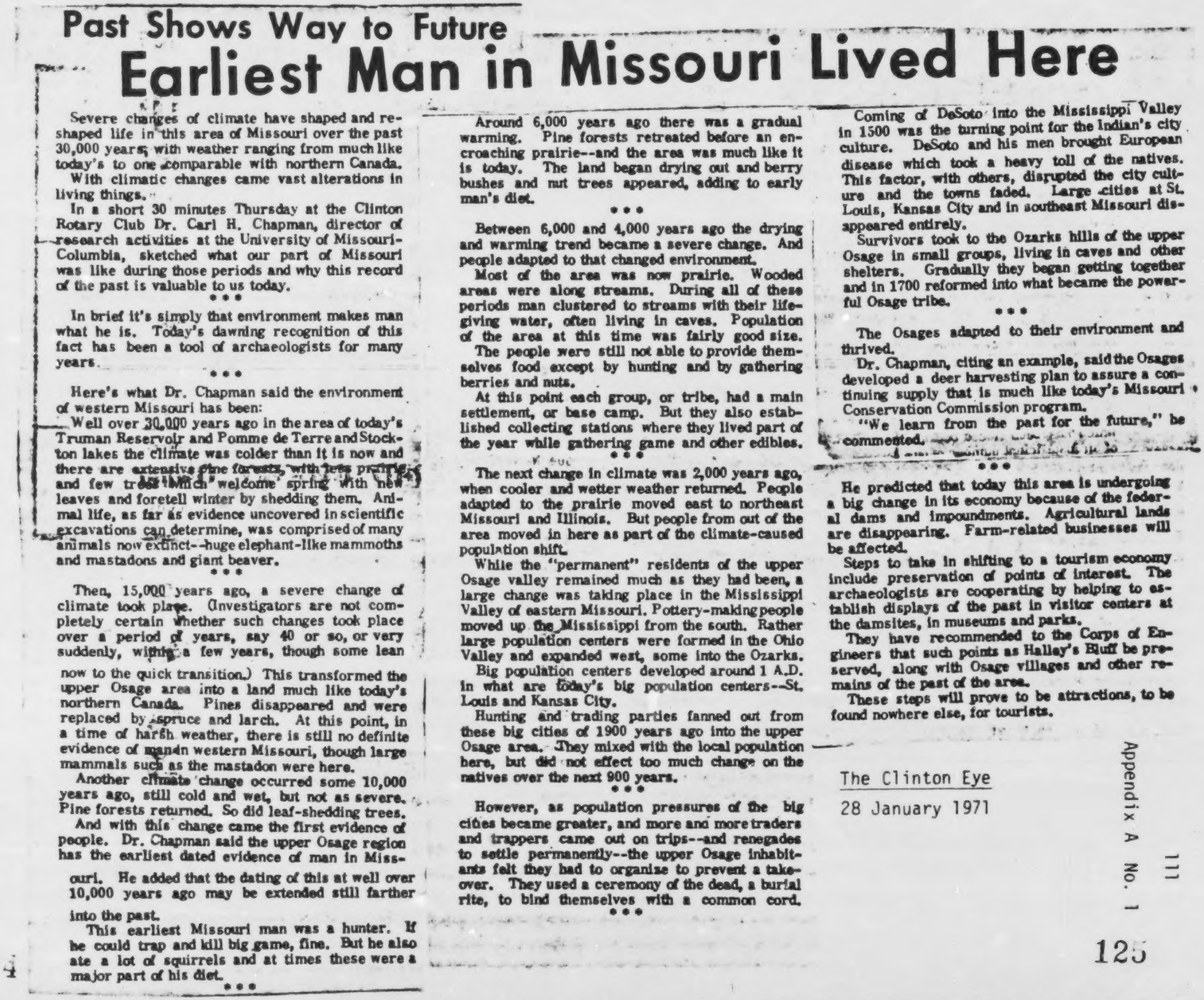
Two of the pits excavated by Shippee contained typical Hopewellian artifacts including large fragments of pottery decorated in Hopewell manner, fragments of tobacco pipes and one complete pipe.

Dr. Johnson said the site would be open to the public to view next Sunday from 2 o'clock to 5 o'clock in the afternoon.

THE TEDIOUS WORK OF EXCAVATING an archaeological site is being done at the Line Creek park in Platte County by Claude Knoles and his daughter, Sue Knoles, both of 132 North Chelsea avenue. The two archaeologists are members of the Kansas City chapter of the Missouri Archaeological association. Twenty students from the Great Plains Archaeological school are helping excavate the Kansas City, North, site.

The Kansas City Star

13 July 1969



Past Shows Way to Future

Earliest Man in Missouri Lived Here

Severe changes of climate have shaped and reshaped life in this area of Missouri over the past 30,000 years, with weather ranging from much like today's to one comparable with northern Canada.

With climatic changes came vast alterations in living things.

In a short 30 minutes Thursday at the Clinton Rotary Club Dr. Carl H. Chapman, director of research activities at the University of Missouri-Columbia, sketched what our part of Missouri was like during those periods and why this record of the past is valuable to us today.

• • •

In brief it's simply that environment makes man what he is. Today's dawning recognition of this fact has been a tool of archaeologists for many years.

• • •

Here's what Dr. Chapman said the environment of western Missouri has been:

Well over 30,000 years ago in the area of today's Truman Reservoir and Pomme de Terre and Stockton lakes the climate was colder than it is now and there are extensive pine forests, with less prairie and few trees which welcome spring with new leaves and foretell winter by shedding them. Animal life, as far as evidence uncovered in scientific excavations can determine, was comprised of many animals now extinct--huge elephant-like mammoths and mastadons and giant beaver.

• • •

Then, 15,000 years ago, a severe change of climate took place. (Investigators are not completely certain whether such changes took place over a period of years, say 40 or so, or very suddenly, within a few years, though some lean now to the quick transition.) This transformed the upper Osage area into a land much like today's northern Canada. Pines disappeared and were replaced by spruce and larch. At this point, in a time of harsh weather, there is still no definite evidence of man in western Missouri, though large mammals such as the mastadon were here.

Another climate change occurred some 10,000 years ago, still cold and wet, but not as severe. Pine forests returned. So did leaf-shedding trees.

And with this change came the first evidence of people. Dr. Chapman said the upper Osage region has the earliest dated evidence of man in Missouri. He added that the dating of this at well over 10,000 years ago may be extended still farther into the past.

This earliest Missouri man was a hunter. If he could trap and kill big game, fine. But he also ate a lot of squirrels and at times these were a major part of his diet.

• • •

Around 6,000 years ago there was a gradual warming. Pine forests retreated before an encroaching prairie--and the area was much like it is today. The land began drying out and berry bushes and nut trees appeared, adding to early man's diet.

• • •

Between 6,000 and 4,000 years ago the drying and warming trend became a severe change. And people adapted to that changed environment.

Most of the area was now prairie. Wooded areas were along streams. During all of these periods man clustered to streams with their life-giving water, often living in caves. Population of the area at this time was fairly good size.

The people were still not able to provide themselves food except by hunting and by gathering berries and nuts.

At this point each group, or tribe, had a main settlement, or base camp. But they also established collecting stations where they lived part of the year while gathering game and other edibles.

• • •

The next change in climate was 2,000 years ago, when cooler and wetter weather returned. People adapted to the prairie moved east to northeast Missouri and Illinois. But people from out of the area moved in here as part of the climate-caused population shift.

While the "permanent" residents of the upper Osage valley remained much as they had been, a large change was taking place in the Mississippi Valley of eastern Missouri. Pottery-making people moved up the Mississippi from the south. Rather large population centers were formed in the Ohio Valley and expanded west, some into the Ozarks.

Big population centers developed around 1 A.D. in what are today's big population centers--St. Louis and Kansas City.

Hunting and trading parties fanned out from these big cities of 1900 years ago into the upper Osage area. They mixed with the local population here, but did not effect too much change on the natives over the next 900 years.

• • •

However, as population pressures of the big cities became greater, and more and more traders and trappers came out on trips--and renegades to settle permanently--the upper Osage inhabitants felt they had to organize to prevent a takeover. They used a ceremony of the dead, a burial rite, to bind themselves with a common cord.

• • •

Coming of DeSoto into the Mississippi Valley in 1500 was the turning point for the Indian's city culture. DeSoto and his men brought European disease which took a heavy toll of the natives. This factor, with others, disrupted the city culture and the towns faded. Large cities at St. Louis, Kansas City and in southeast Missouri disappeared entirely.

Survivors took to the Ozarks hills of the upper Osage in small groups, living in caves and other shelters. Gradually they began getting together and in 1700 reformed into what became the powerful Osage tribe.

• • •

The Osages adapted to their environment and thrived.

Dr. Chapman, citing an example, said the Osages developed a deer harvesting plan to assure a continuing supply that is much like today's Missouri Conservation Commission program.

"We learn from the past for the future," he commented.

• • •

He predicted that today this area is undergoing a big change in its economy because of the federal dams and impoundments. Agricultural lands are disappearing. Farm-related businesses will be affected.

Steps to take in shifting to a tourism economy include preservation of points of interest. The archaeologists are cooperating by helping to establish displays of the past in visitor centers at the damsites, in museums and parks.

They have recommended to the Corps of Engineers that such points as Halley's Bluff be preserved, along with Osage villages and other remains of the past of the area.

These steps will prove to be attractions, to be found nowhere else, for tourists.

The Clinton Eye

28 January 1971

Appendix A No. 1

Appendix A No. 1

Prehistoric litter in Ozarks provides clues to man's past

By Bill Prater
Of the Mid-America Staff

BOAZ, Mo. — Every time Charles or Marjorie Crowley plowed their field next to the James River, they uncovered dozens of stone arrowheads, knives and tools.

A nearby cave had yielded almost as many artifacts, back when Crowley's grandfather let his pigs root around inside to escape the blistering Ozarks heat.

"We knew it had to be more than just a band of Indians passing through," Mrs. Crowley said. "We knew it had to be old, too. We just didn't have any idea how old that might be."

In 1975, the Crowleys invited Professor Robert Cooley of Southwest Missouri State University to inspect the cave and the material they had collected on their land east of Boaz.

The result was the rare kind of discovery that keeps an archaeologist digging.

The chigger- and snake-ridden spot is the richest archaeological find to date in southwest Missouri, and it may yield the oldest clues on man in this part of the United States.

"We were utterly amazed at what we found here," recalled Cooley, director of the university's Center for Archaeological Study.

Five years later, he and other scientists are only scratching the surface of the "Crowley Site." But they say it's been used by man for at least 10,000 years.

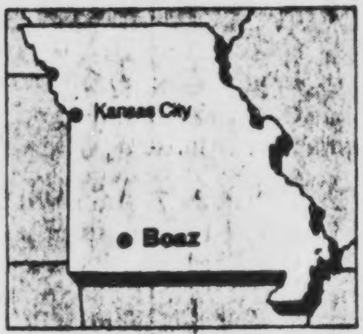
Ten millennia before Crowley's great-great-grandfather built a little log house next to the James River, the first migratory hunters took refuge in the cave. As civilizations rose and fell in Mesopotamia, Egypt and Rome, Indians lived at the site almost continuously until Lorenzo Frazier and his family claimed the spot in 1848.

A lingering look and a little imagination are all it takes to see why prehistoric Indians turned cave men in the dry, rugged Ozarks south of Springfield.

The opening of the cave, shaded by giant oaks, is at the base of a steep hill, above the flood plain but within 100 yards of the James River. The cave is dry and naturally air-conditioned.

A small but dependable spring bubbles from the side of the hill, providing running water within 10 feet of a fire pit at the cave entrance.

The place seems to have had everything but a garbage disposal — which explains how folks finally made the cave unfit to live in.



At one time the shelter was about 15 feet high, Cooley said. But the litter of 2,000 generations gradually made a cozy hideaway unsuited for anything taller than Grandpa Crowley's hogs. Researchers now have to stoop as they work inside the cave, which is barely 5 feet high.

But that 10 feet of garbage, called the "midden" by archaeologists, is one of the things that have them most excited. By slowly sifting through the layers, an inch at a time, they are learning what the first Americans ate, what tools they used and how their migratory habits fitted into the often-hostile environment of the Missouri Ozarks.

"Indians in the Ozarks never settled in large villages, never started farming as they did along the Mississippi or Illinois Rivers (in adjacent Illinois)," Cooley said.

"There are big gaps in our knowledge of the Indians of southwest Missouri," added Burt Purrington, associate director of the Center for Archaeological Study. "We expect this site to quadruple the information we have now."

Two summers ago, searchers found signs of a prehistoric village not far from the cave, which also had been used for thousands of years. Instead of digging farther, the workers covered up the hole they had made.

"We want it untouched until we can do the work properly," Purrington explained. "We will do no more until we have substantial funds."

Even with most of the site untouched, the archaeologists have learned much from their growing piles of artifacts.

The first inhabitants were almost exclusively hunters, prowling the river bottoms in search of deer, squirrels and other game.

From about 7000 to 1000 B.C., the hunters also fished and collected wild plants for food. This forced them to roam according to seasonal cycles, according to Carolyn "Jeep" Helm, who is leading excavation work at the site this summer.

For some reason, indicated by the type of garbage thrown atop the growing pile at the cave entrance, the Indians returned to the life of the hunter for the next 2,000 years.

They became more sedentary from A.D. 1200 to 1808, in the so-called "Woodland Culture" period, Ms. Helm said. Archaeologists have found pottery and more sophisticated arrow points that suggest the Indians had more leisure time.

By 1808 the historic Indian tribes — Osage, Delaware, Kickapoo and Shawnee — had moved into the area and were practicing some agriculture supplemented with hunting.

Some of them were still there when Frazier arrived on the land, which was given to him by the federal government for helping fight the Seminole Indians in Florida.

Kansas City Times
16 July 1980

Appendix A
No. 1

Bill Prater/staff

Archaeology workers gingerly remove Indian artifacts from an excavation near Boaz in southwest Missouri.

Kansas City Times

16 July 1980

Ancient structure's riddle defies solution

Archaeologists seek key to Woodhenge

By Steve Nicely
A Member of the Staff

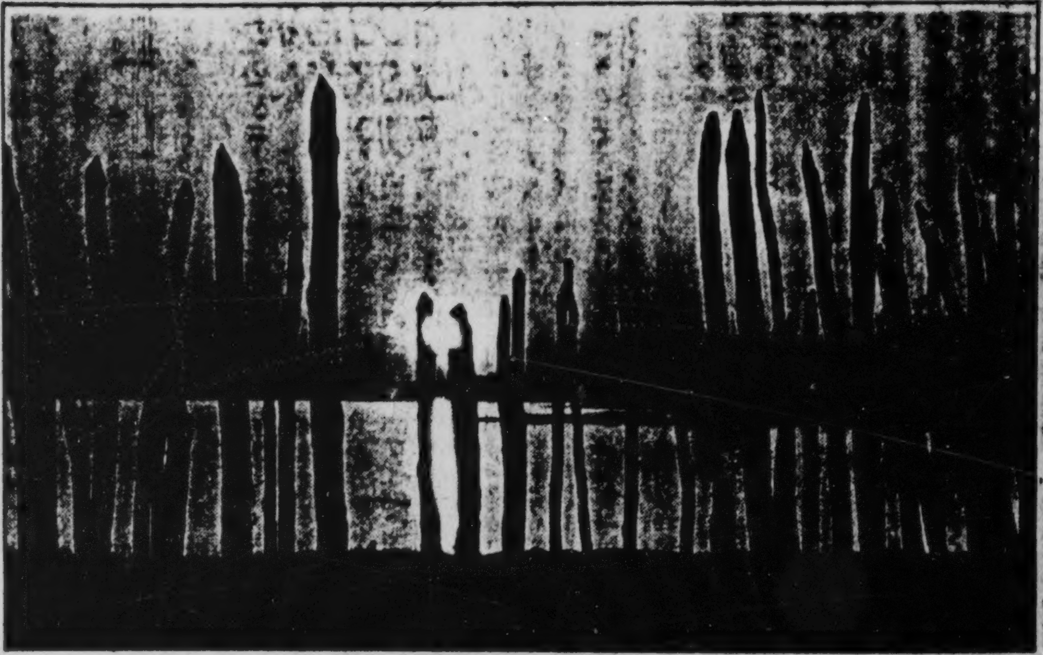
Milton Perry, curator of historic sites for the Clay County Parks Department, braced himself against the pre-dawn breeze that swept across Smithville Lake and the shadowed teeth of an ancient mystery known as Woodhenge.

Then the first sliver of sun appeared through an opening in the 25-foot square of wood poles. Mr. Perry photographed it.

"It's right where it's supposed to be," Mr. Perry said of the sun. But the problem, he quickly added, was that he didn't know where he was supposed to be standing to solve a riddle that has puzzled scientists for four years: how the builders of the celestial observatory used it to predict the changing of the seasons.

The highly sophisticated civilization responsible for Woodhenge apparently vanished about 700 years ago, leaving no clues about its fate. And the

See WOODHENGE, Page A-6, Col. 4



Mark Harrison/Staff

The sun peeks between poles of Woodhenge, being reconstructed on the banks of Smithville Lake.

WOODHENGE

Continued from Page A-1

only clue about how to operate their 16-pole monument is a fist-sized polished stone engraved with a geometric design, found in 1978 when the ruins were discovered during excavations for the lake.

The original site is now under about 15 feet of water, and Mr. Perry and a team of archaeologists are still reconstructing Woodhenge on ground nearby.

Mr. Perry was the only trained observer at the site Tuesday, the winter solstice, when the sun is the farthest south of the equator and the day is the shortest of the year. And for Mr. Perry, the morning was marked by signs of ages old and new, where the calls of an owl and a goose from across the water mingled with the rumble of a distant diesel locomotive, where frost-coated driftwood shared the shoreline with a rusted canister of insect repellent.

Woodhenge is thought to have been built by members of a western outpost of Middle Mississippeans, a people who, some authorities contend, achieved the highest prehistoric civilization north of Mexico. Three structures similar to Woodhenge, named after Stonehenge in England, have been found at Middle Mississippeans' chief city, Cahokia, which is near East St. Louis, Ill.

Michael K. Kelley, a member of the Astronomical Society of Kansas City, said not all scientists accept Woodhenge as a celestial calendar. "We just need more people to come and take a look at it," he said.

Still, Mr. Kelley said, it should not be surprising that the builders of Woodhenge, known as Cahokians, could construct an observatory telling them when to plant, when to expect buffalo migrations and when to prepare for winter.

"They had all this time on their hands at night with nothing else to do," Mr. Kelley joked. "They had no TV, no radio, and they couldn't jump in the car and go down to the pub. Actually, the sky was their television set."

Both Mr. Perry and Mr. Kelley said they see an irony in the fact that expanded personal freedoms have resulted in a more provincial view of the universe. Most people pay little attention to the heavens and the weather, they said.

"We try to run the same course of life no matter what the weather is," Mr. Perry said. "If it snows, we expect to try to go to work. Years ago they just buttoned up and said, 'Why fight it?' "

But the two disagree on the exact use of Woodhenge. Mr. Kelley said the structure lacks the precision of other prehistoric calendars. The size of its corner openings seem too large for accurate sightings of the sun at the change of seasons, which could throw predictions off by two or three weeks, he said.

Nonetheless, he said, the use of distant landmarks could have made the structure highly accurate. The original construction site, which was in a valley, would have made that possible, he believes.

Mr. Perry, however, said he thinks Woodhenge is "more sophisticated than any of us have realized. With 12 poles on the east, north and west, you can line up two poles with the position of the sunrise or sunset practically any day of the year. There are so many possibilities."

What is known with more certainty is that the Cahokians were capable of building large cities, feeding large populations and developing laws and elaborate ceremonial rituals. They also had a sophisticated form of art, Mr. Perry said.

The Cahokians, who were much more advanced than western nomadic Indians, lived in permanent villages. They hunted, fished, gathered wild food plants and cultivated corn, beans and squash.

Sometime between A.D. 900 and 1200, the Cahokians built a pyramid of earth in Cahokia.

The Cahokian empire ranged from Wisconsin to Alabama, and from Pennsylvania to Kansas and Nebraska. The nearest Cahokian village to Woodhenge was 15 miles down the Little Platte River.

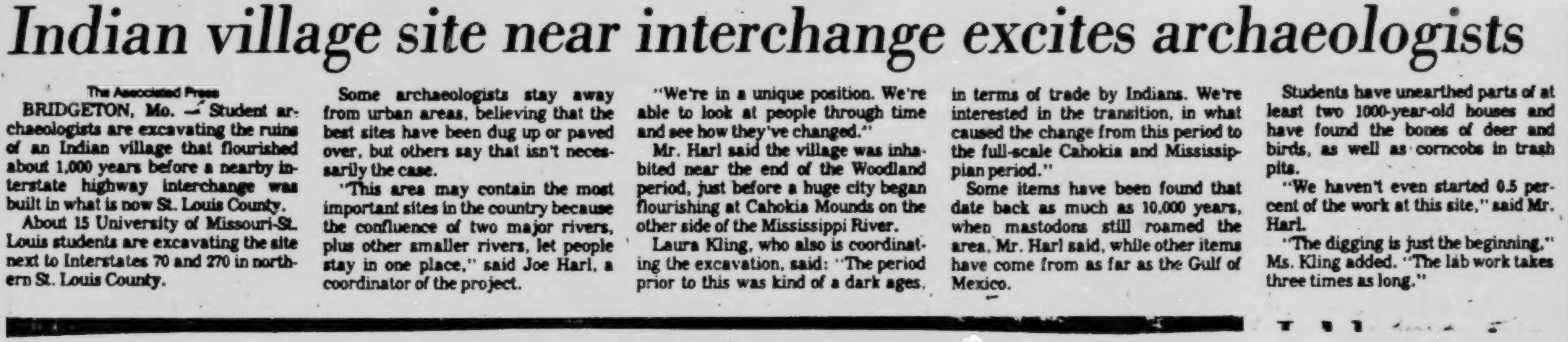
"What happened to them, nobody knows," Mr. Perry said. "The first explorers came down the Mississippi and found the ruins in the 1600s, but the few Indians living there had no knowledge of them."

The Cahokia Mounds Museum Society of Collinsville, Ill., speculates that a climatic change may have adversely affected the food supply at Cahokia, which had an estimated population of more than 30,000.

"They really had their act together and they just vanished," Mr. Kelley said. "I hate to say it, but the same thing might happen to us someday. Then somebody else will come along and wonder what happened to us."

Kansas City
Times

22 Dec. 1982



Indian village site near interchange excites archaeologists

The Associated Press

BRIDGETON, Mo. — Student archaeologists are excavating the ruins of an Indian village that flourished about 1,000 years before a nearby interstate highway interchange was built in what is now St. Louis County.

About 15 University of Missouri-St. Louis students are excavating the site next to Interstates 70 and 270 in northern St. Louis County.

Some archaeologists stay away from urban areas, believing that the best sites have been dug up or paved over, but others say that isn't necessarily the case.

"This area may contain the most important sites in the country because the confluence of two major rivers, plus other smaller rivers, let people stay in one place," said Joe Harl, a coordinator of the project.

"We're in a unique position. We're able to look at people through time and see how they've changed."

Mr. Harl said the village was inhabited near the end of the Woodland period, just before a huge city began flourishing at Cahokia Mounds on the other side of the Mississippi River.

Laura Kling, who also is coordinating the excavation, said: "The period prior to this was kind of a dark ages, in terms of trade by Indians. We're interested in the transition, in what caused the change from this period to the full-scale Cahokia and Mississippian period."

Some items have been found that date back as much as 10,000 years, when mastodons still roamed the area, Mr. Harl said, while other items have come from as far as the Gulf of Mexico.

Students have unearthed parts of at least two 1000-year-old houses and have found the bones of deer and birds, as well as corncobs in trash pits.

"We haven't even started 0.5 percent of the work at this site," said Mr. Harl.

"The digging is just the beginning," Ms. Kling added. "The lab work takes three times as long."

Kansas City Times

28 May 1982

Appendix A No. 2

Dig for Indian Relics Ahead of a New Kansas Lake Development

ANCIENT INDIAN DWELLERS left behind myriad artifacts on a property in Miami County, Kansas, soon to be covered by a 3,100-acre lake which will serve a large new power generating plant near La Cygne, Kas. Thomas Witty, archeologist for the Kansas State Historical society, works with six college students uncovering the relics. The lake will be partly in Miami County and partly in Linn County.

In the orange clay beneath the corn stalks in a Miami County field, half a dozen college youths have uncovered the remnants of an Indian culture believed to have flourished there 3,000 years ago.

Digging last month under the direction of Thomas Witty, Topeka, archeologist for the Kansas State Historical Society, the youths brought up evidence that the area was inhabited around 1650 BC.

The archeological investigation was undertaken in the North Sugar creek valley which will be inundated next year by a 3,100-acre lake being constructed for the huge La Cygne steam-electric generating plant.

The investigation was carried out under a grant by the Kansas City Power & Light company and Kansas Gas & Electric Co., developers of the power project. The lake will begin to fill next year, although the power plant will not be ready for operation until the spring of 1973.

WITTY SAID small artifacts similar to those found in 1963 at the site of the John Redmond dam in Coffey County were uncovered on the Roscoe Long farm. The farm is in Miami County, a short distance north of the Miami-Linn County boundary.

The archeologist said stone knives, scraping tools, stone cores and flint chips found at the site probably were left by nomad Indian tribes living around 1650 BC. A grinding slab uncovered is of special significance, he said. The tribes were known as hunters and gatherers, but engaged in no agriculture.

Working with shovels, trowels and whisk brooms, the party searched the soil to a depth of about 30 inches. Burned rocks and flint chips on the surface led the party to at least nine sites in the lake area, each believed to have been the location of a temporary dwelling of the earlier inhabitants.

Kansas City Star

29 June 1969

Students Excavate in Kansas

Appendix A No. 2

Young Anthropologists Dig History

By Ellen Hess
(A Member of The Star's Staff)

First there were chiggers, then mosquitoes. Now it is sweatbees that are plaguing a team of University of Kansas anthropology students who are digging in a fallow field in Miami County, Kansas, for Indian artifacts that may date back 7,000 years.

But finds as singular as a projectile point from the field or as spectacular as two reconstructable vessels from another site make the discomfort, sun and humidity worthwhile.

Work Under Contract

The team, headed by Larry Bradley, an undergraduate from Lawrence, Kas., is working under a contract the university has with the National Park service.

The young anthropologists exhibit an urgency as they work on the "salvage archaeology" project. The area will be inundated by the waters of the proposed Hillsdale reservoir on Bull creek.

The 8-week project started June 9 with a survey of possible sites to dig. An Olathe physician who is interested in Indian lore, Dr. William Matthews, called the attention of the university to the area about two years ago, Bradley said.

"He had some projectile points that looked fairly old," Bradley said. "They appeared to be from the 'before pottery' period."

Bradley said similar points had been dated as far back as 7,000 years ago, but a more conservative estimate was 4,000.

One student, Peter A. Nelson, 25, of 3020 North Seventy-fourth street, Kansas City, Kansas, discovered a point this week in the field site. It was the second from the area, but the recoveries from the site are generally disappointing, and Bradley is thinking of closing it down.

"Two points—that's about the story of Kansas archaeology," the director admitted.

But Monday, careful shaving of soil in 2-meter squares, revealed a change in coloration along a straight line. Bradley said it could be the outline of a structure—or an excavation from a test dig conducted in the area in 1960.

A SHOVEL OF DIRT FLIES through the air as Miss Kathy King of San Antonio, Tex., digs for Indian artifacts within a square designated as a projectile point pit. Digging in another pit are Charley Money, Fairview, Kas., and Miss Candy Heavin, 8805 West Ninetieth terrace, Overland Park.

Bradley hopes the excavation might turn up a piece of carbon from which carbon 14 dating can determine the age of the artifacts.

Since some organic material has a tendency to carbonize on its own, he would like to find carbon next to some kind of cooking utensil to increase the likelihood the carbon's original use was as fuel.

The first site yielded a bonanza for the team.

"We had real good luck for Kansas," was the way Miss Danille Harder, a graduate student from Wichita, put it.

In the 60 square feet of excavated area, the team turned up the outline of an oval structure, possibly a house, measuring 18 by 20 feet.

Proof came in cross-section colorations that showed areas where posts were once placed, Bradley explained.

Away from the structure the students uncovered a hearth and a stone-lined storage pit. The pit indicates the Indians were farmers. Bradley thinks they lived about 900 A. D.

A large piece of pottery and reconstructable vessels turned up at this site, plus other pottery chips and projectile points. The students collect the artifacts in paper bags, labeled with the site designation, the meter square and the depth.

Use Farm Home

Miss Candy Heavin, 8805 West Ninetieth terrace, Overland Park, a senior who is the laboratory assistant, marks the pieces, indexes them on cards and stores them in a system of boxes. Miss Heavin works at an old farmhouse the team is using for headquarters.

The farmhouse, which no longer has running water in the kitchen sink, also serves as living quarters for the crew. The project provides room and board plus a wage of $1.50 an hour. Bradley's wife, Mrs. Sandy Bradley, cooks for the group and buys supplies in Paola, Kas., on Saturdays.

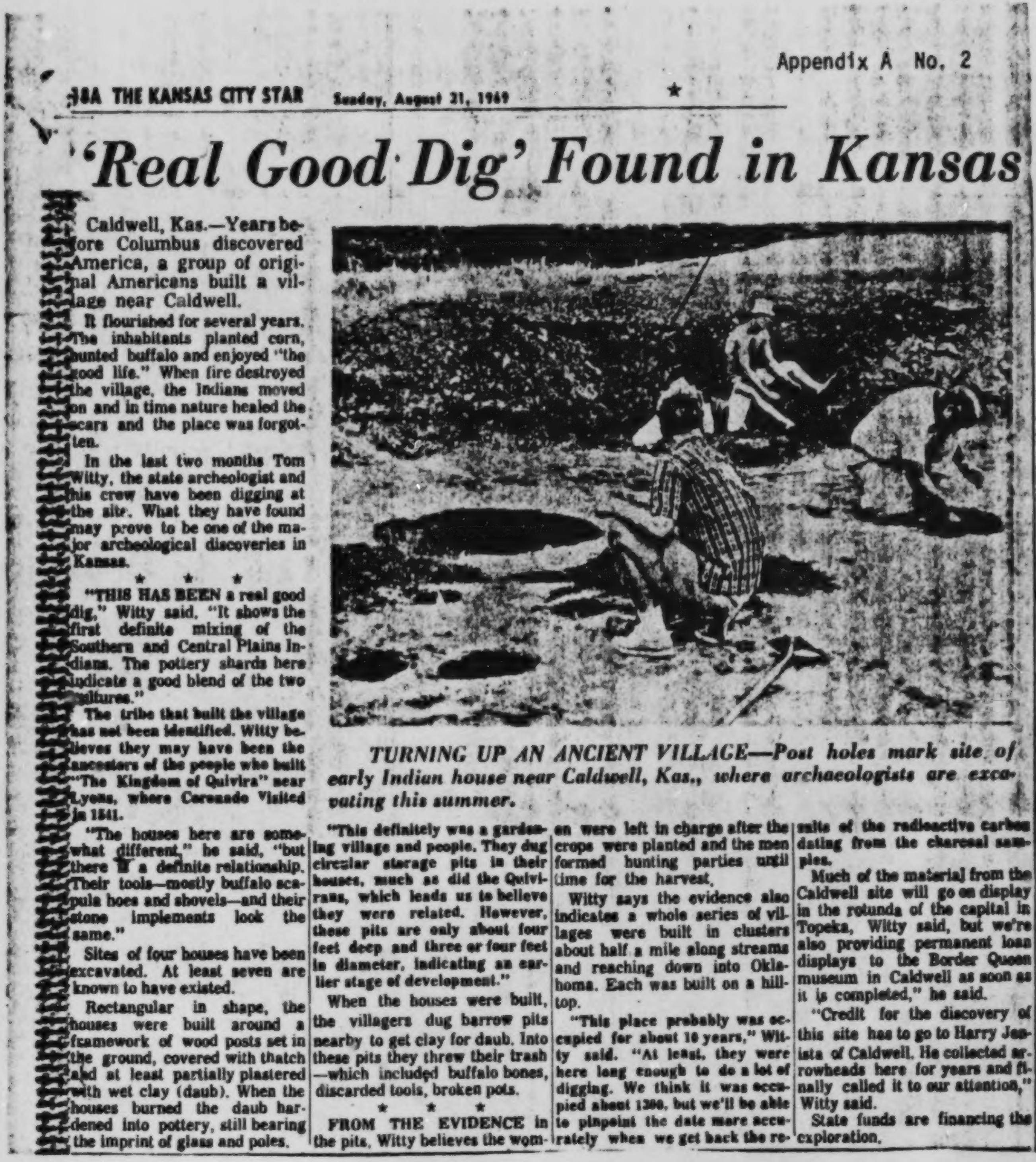
Bradley is reluctant to pinpoint the project location because sites often have been raided by indiscriminate or amateur collectors.

"They dig away at our excavation," he lamented.

Kansas City Star

25 July 1969

Appendix A No. 2



38A THE KANSAS CITY STAR Sunday, August 31, 1969 ★

'Real Good Dig' Found in Kansas

Caldwell, Kas.—Years before Columbus discovered America, a group of original Americans built a village near Caldwell.

It flourished for several years. The inhabitants planted corn, hunted buffalo and enjoyed "the good life." When fire destroyed the village, the Indians moved on and in time nature healed the scars and the place was forgotten.

In the last two months Tom Witty, the state archeologist and his crew have been digging at the site. What they have found may prove to be one of the major archeological discoveries in Kansas.

★ ★ ★

"THIS HAS BEEN a real good dig," Witty said. "It shows the first definite mixing of the Southern and Central Plains Indians. The pottery shards here indicate a good blend of the two cultures."

The tribe that built the village has not been identified. Witty believes they may have been the ancestors of the people who built "The Kingdom of Quivira" near Lyons, where Coronado visited in 1541.

"The houses here are somewhat different," he said, "but there is a definite relationship. Their tools—mostly buffalo scapula hoes and shovels—and their stone implements look the same."

Sites of four houses have been excavated. At least seven are known to have existed.

Rectangular in shape, the houses were built around a framework of wood posts set in the ground, covered with thatch and at least partially plastered with wet clay (daub). When the houses burned the daub hardened into pottery, still bearing the imprint of glass and poles.

TURNING UP AN ANCIENT VILLAGE—Post holes mark site of early Indian house near Caldwell, Kas., where archaeologists are excavating this summer.

"This definitely was a gardening village and people. They dug circular storage pits in their houses, much as did the Quivirans, which leads us to believe they were related. However, these pits are only about four feet deep and three or four feet in diameter, indicating an earlier stage of development."

When the houses were built, the villagers dug barrow pits nearby to get clay for daub. Into these pits they threw their trash—which included buffalo bones, discarded tools, broken pots.

★ ★ ★

FROM THE EVIDENCE in the pits, Witty believes the women were left in charge after the crops were planted and the men formed hunting parties until time for the harvest.

Witty says the evidence also indicates a whole series of villages were built in clusters about half a mile along streams and reaching down into Oklahoma. Each was built on a hilltop.

"This place probably was occupied for about 10 years," Witty said. "At least, they were here long enough to do a lot of digging. We think it was occupied about 1200, but we'll be able to pinpoint the date more accurately when we get back the results of the radioactive carbon dating from the charcoal samples.

Much of the material from the Caldwell site will go on display in the rotunda of the capital in Topeka, Witty said, but we're also providing permanent loan displays to the Border Queen museum in Caldwell as soon as it is completed," he said.

"Credit for the discovery of this site has to go to Harry Jenista of Caldwell. He collected arrowheads here for years and finally called it to our attention," Witty said.

State funds are financing the exploration.

Kansas City Star

31 August 1969

Appendix A No. 2

Spanish treasure found in Indian burial mound

By the Associated Press

Sebastian, Fla.—Researchers at an ancient burial mound here say they may have uncovered millions of dollars worth of Spanish treasure.

While state officials have known about the site for about 12 years, they showed little interest until a group of amateur archaeologists submitted preliminary findings, said Homer Cato, the group's leader and president of the South Brevard (Fla.) Historical Society.

The Treasure Coast, a Florida magazine, last week revealed the find at an Ayz Indian village site.

"It's an ancient monument that took centuries to build and even contains the people who built it. It will be tragic if it's not excavated," said Calvin Jones, chief archaeologist for the state of Florida.

Cato and Eugene Lyon, who has recovered Spanish treasure off Key West, Fla., said Spanish archives indicated that cannibals, living with shipwrecked Europeans they had captured, were the first to salvage treasure in the area,.

Research indicates the Indians captured survivors of French and Spanish shipwrecks between 1500 and 1550, Cato said. The archives state that two men rescued by French sailors under Jean Ribaut said that Europeans were living with the Ayz in 1562—three years before the settlement of St. Augustine, Fla., America's oldest city.

Florida
Atlantic Ocean
SEBASTIAN
Tampa
West Palm Beach
Miami
Gulf of Mexico

A fortune in precious stones and metals was recovered recently at the mound, along with the skeleton of a half-breed woman who was about 25 at the time of her death, according to Cato.

A cross of conch shells was the first major find, he added, indicating that the Indians had adopted some of their captives' cultural and religious aspects.

Jewels and precious metals found at the mound have been placed in a bank vault at an undisclosed location, he added.

Lyon referred to the Sebastian site as the most important excavation in the country.

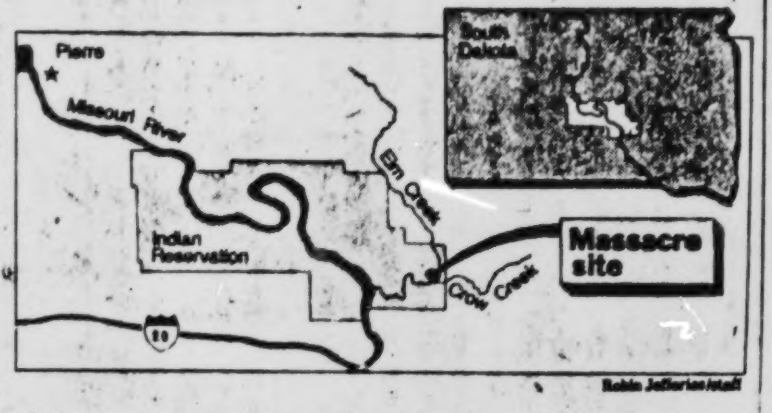
Kansas City Star

3 August 1980

Appendix A No. 2

Work at Indian burial site unearths evidence of an ancient massacre

New York Times News Service



Robin Jefferies/staff

NEW YORK — Grim evidence of ancient savagery — a mass grave containing the skeletons of at least 486 murdered and mutilated men, women and children — is being investigated near the banks of the Missouri River in South Dakota.

Between 1325 and 1400, apparently during a prolonged drought that forced severe competition for food, one group of Indians attacked and massacred another. Most of the skulls were bashed in, and knife marks indicate that nearly all were scalped. Many skeletons were missing hands and feet. Some noses were hacked off.

It is the largest prehistoric American massacre site ever found. According to anthropologists who have been excavating and analyzing the site over the past two years, further study is expected to improve understanding of the environmental and social pressures that affected Indian cultures in the centuries just preceding European penetration of North America.

It is already clear, however, that the discovery should serve to temper the view, recently re-popularized, that life in prehistoric cultures was unremittingly blissful. "People have tended to idealize Indian life in the past. It goes all the way back to Rousseau's noble savage," said Dr. Larry Zimmerman of the University of South Dakota in Vermillion.

Zimmerman is in charge of research on the massacre. "A site like this one forces you to look again at the nature of warfare and the conditions that trigger it. I'm not so sure the Indians responded any differently than we would if our standard of living was threatened."

It is known that in the years preceding the massacre there was a prolonged drought to the south in what are now Nebraska and Kansas. Over a period of decades, Central Plains Indians migrated northward to the Dakotas. The migrant culture blended with that of the "middle Missouri tradition," already established in South Dakota.

Zimmerman speculates that food shortages caused by the drought and the increased population may have imposed severe strains on many villages. Many of the skeletons show signs of malnutrition. "We're pretty sure that warfare must have been a common problem, because most of the villages in the area were fortified with a deep ditch and a stockade wall," Zimmerman said.

The massacre site had two fortification ditches — an older one that had been filled in and a newer one outside it that appears to have been under construction at the time of the attack. The site is on a bluff at the confluence of Elm Creek and Crow Creek, near the Missouri River as it passes through the Crow Creek Indian Reservation in central South Dakota.

Zimmerman estimates that the village had 700 to 1,800 inhabitants living in at least 55 earth lodges.

One clue that the massacre was an unusually concerted act of war and not a random incident of violence is the sheer number of people killed. In addition to the 486 skeletons already recovered, it is estimated that there are 50 others still buried. The area excavated so far is about 20 feet square.

"An attack like this would have required a larger force than you normally find in a nomadic hunting group or even a Roman war party," Zimmerman said.

Some of the bones show marks of gnawing by dogs, which the Indians kept and sometimes ate, and the effects of weathering. These are taken as evidence that the people were killed all over the village, and that their bodies were left on the ground for some time and only later gathered into the mass grave.

Of the skeltons that could be assigned an age and sex, 152 were children under the age of 14. Of those between 15 and 39 years of age, 78 were men and 28 women. Of the 70 victims judged to be between 40 and 60, two-thirds were men and one-third women. The underrepresentation of women suggests that, in accordance with a common practice, many of the women were captured rather than killed.

Although the Crow Creek site is on the land of what is today a Sioux reservation, the people involved in the massacre were not Sioux. They were of the Arikara tribe, a division of the larger Caddoan language group, which also included, in later times, the Pawnee confederacy. A few Arikara Indians survive today on reservations in North Dakota.

Kansas City Times

29 May 1980

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Ancient massacre offers lesson for today

By Rick Atkinson
National Correspondent

VERMILLION, S.D. — Their bones lie in an unholy crypt, bagged, boxed and stacked in a concrete powerhouse at the south end of Big Bend Dam. Skulls and femurs, tibiae and fibulae — the whirring sepulcher holds the jumbled remains of 500 Indians massacred six centuries ago on a desolate bluff five miles down the Missouri River.

They were victims of an ancient fratricide, a brutality remarkable even by the exacting standards of the 20th century. Buried and forgotten long before Columbus dreamed of his New World, these Indians left a legacy now being pieced together by archaeologists.

"There's been a tendency to identify the Indian with Rousseau's vision of the noble savage, totally attuned to nature and the people around him," says Dr. Larry Zimmerman, chief archaeologist at the University of South Dakota.

Thursday
Journal

"But this excavation shows that they were not immune from the same kinds of pressure from their environment as other people. And they lashed out. . . . The whole thing when it boils down has to be one of the most fascinating chapters of Plains archaeology. We never really contemplated the level of violence, the level of warfare going on there."

Like most stunning archaeological finds this one had its luck.

It was Memorial Day 1978 and Robert Alex, state archaeologist, was escorting the South Dakota Archaeological Society over site 39BF11, a prehistoric Crow Creek village. Built on an arrowhead-shaped promontory above the Missouri, the village had been excavated in the mid-1950s, yielding little except the depressions of prehistoric lodges put to the torch.

A member of Alex's group wandered away into a stand of cottonwoods. Gazing down 100 feet where Lake Francis Case gnawed away at the bluff face, the amateur saw a bone protruding beneath the cliff lip. It was human.

The archaeologists began sifting through the red tape and paperwork layering any dig on government property. One afternoon several scientists

See JOURNAL, Page A-4, Col. 1

JOURNAL

Continued from Page A-1

eased themselves over the bluff with a rope tied to a car bumper only to find that a looter cruising the shoreline had flailed away with a pick. Forty-four skeletons were strewn down the cliff face; the flabbergasted scientists stuffed the bones into grocery bags and posted Indian guards.

In August the dig began. Battling heat and flies, the excavators dug down 15 feet, wearing painter's masks at times to avoid choking on the swirling dust. As bones began poking through the dirt, shovels were swapped for dental picks, paintbrushes, sharpened popsicle sticks and grapefruit knives. Stunningly, the bonepile grew and grew and grew.

Massed in a three-foot layer about 20 feet square, were the skeletons of 500 men, women and children. Virtually all had a knife mark groove around the skull where they had been scalped. There were no whole skeletons and dog and coyote gnaw marks suggested the bones were exposed for perhaps six months before being buried. Only 10 or 12 hands were found.

By now, the archaeologists realized they had stumbled upon the largest prehistoric American massacre ever found. Hopeful looters hovered nearby with their spades and busloads of school children would drive out to peer into the ghastly pit. Some local Sioux began to fret that the commotion was disturbing the wanagi, malevolent spirits who guard the dead.

After several elderly Indians died and the excavators heard an eerie wail one noontime, a Sioux holy man named Bill Schweigman was summoned from the Rosebud reservation. Schweigman built a sweat lodge and lapsed into a chanting trance one night, seeking contact with the supernatural. The next day he announced that the wanagi were gone, that the proper rites had been performed ages ago. The bones were simply bones.

By Thanksgiving the dig was finished. Bones were labeled, packed and carted off to laboratories. The pit was filled in and a 24-hour guard posted. Archaeologists, doctors and nutritionists at the universities of South Dakota, Massachusetts, Tennessee and Indiana began the 10-year task of unraveling what had happened.

Where science stops, imagination lends poignancy to Crow Creek, a sense of loss across six centuries and a slight ache in the heart as when contemplating Guernica or My Lai or other villages obliterated in a blind murderous spasm.

Here is the tale pieced together by Zimmerman and his colleague, Richard Whitten:

Sometime after 800 A.D., the forefathers of the massacre victims moved up the Arkansas River drainage into Kansas, Oklahoma and Nebraska. Agriculture begat civilization, releasing them from the relentless odyssey of nomadic hunters. But it also clapped them in fetters. Cultivation of corn lashed them to the land; when the corn was stunted with drought, they suffered.

Around 1150 A.D., strange climactic changes crept across the Great Plains, sharply reducing the rainfall needed by these Arikara Indians for their crops. Once again they moved, following the Missouri northward to the arrowhead-shaped spit where they built their village around 1200.

Perhaps a dozen villages, cousins to one another, thrived along a 60-mile stretch of river. The Crow Creek village population may have reached 1,700, as the Indians scrambled down the bluffs every day to tend their corn, beans and squash with hoes made of buffalo shoulder blades strapped to saplings.

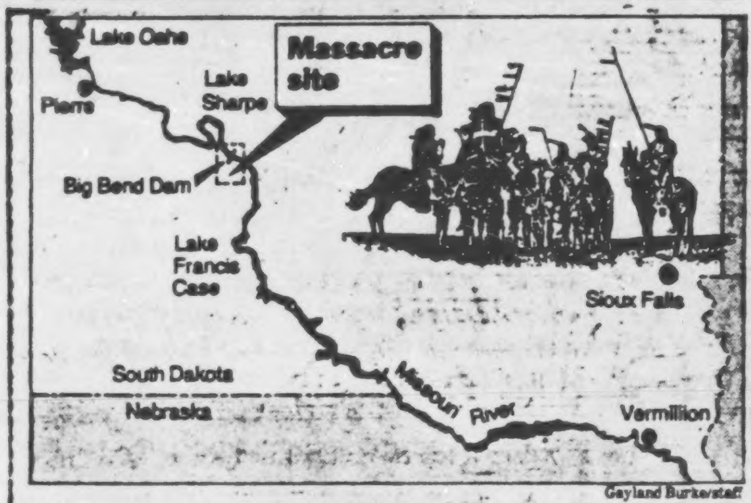
But there was too little arable land, too many people. X-rays of leg and arm bones show growth arrest lines; eye sockets are pitted like pumice with tiny holes called cribra orbitalia, a telltale symptom of chronic hunger and malnutrition.

Perhaps there had been a long-standing feud, a prehistoric Hatfield and McCoy or Capulet and Montague antagonism. Whatever the reason, harmony snapped, some delicate balance tipped. Certainly the Crow Creek village expected trouble. At the time of the attack they were building a fortification moat and pallisade wall. It was half completed.

A frosty dawn in the autumn of 1325. Hundreds of enemy warriors creep near but the Crow Creek village slumbers, 15 or 20 Indians in each large circular hut. Dogs prick their ears and yap at the strange rustling beyond the ditch. But it is too late.

Wave after wave of braves sweep through the village, torching the huts and slaughtering the villagers with stone spears, knives and arrows. Hands are lopped off for finger bone

Kansas City Times, 30 October 1980



Gayland Burke/staff

necklaces and scalps by the hundreds are sheared. The defenders rally for a feeble last stand before falling. Young women and children are led in a shrieking procession back to the marauders' village. Silence descends like a curse.

Months later a few survivors return. The gnawed bones are dragged to a corner of that pathetic ditch. Bushels of clay mud are hauled up the bluff from the river flat to cover the dead. Last rites are chanted. The living flee.

Around 1500, the other Arikara villages along the river moved even farther north and mingled with the Mandans. In 1830, the white man's smallpox decimated the tribe; the few left today in North Dakota have shown little interest in the discovery at Crow Creek.

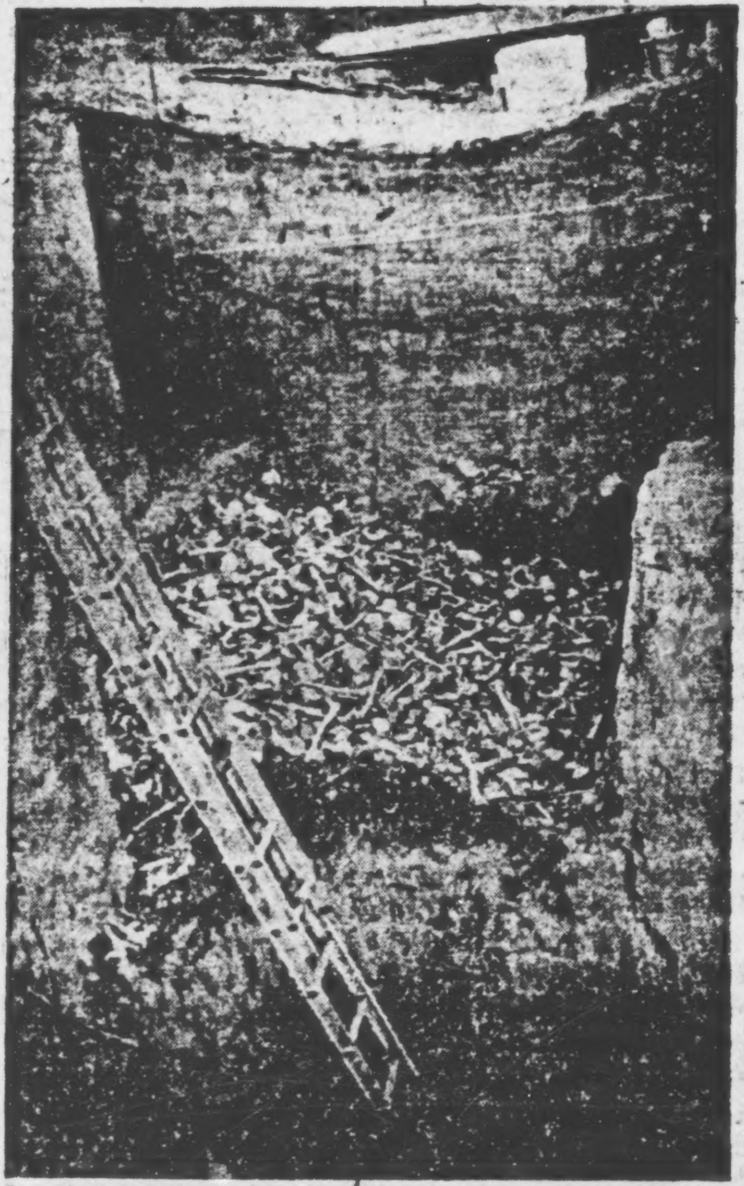
In 1750, Sioux tribes began filtering into the river region from Minnesota. Some dim memory of bloodshed sticks like an arrowhead in the tribal memory and Sioux fathers tell their children that Crow Creek was the site for a last big battle between the Sioux and Arikara. The legend is false, truth more awful.

So now the scientists study the bone X-rays and nutritional evidence and pottery. Laymen have suggested the deed was done by Vikings or marauding Sioux, but Zimmerman is quite certain of his scenario.

Yet the mind balks at his conclusions — that the farmers were only human and there were too many of them. Such brutality must be an aberration, a communal psychosis. Genocide seems too ghastly a safety valve, whether committed with stone spears or nuclear warheads.

Because of the Arikara disinterest, ablutions have been left to the Sioux, although they are as ethnically removed from the victims as the Irish from Albanians. Congress is contemplating the site for a national monument but for now the Indians stand guard.

Someday the cardboard boxes of bones will be hauled from their tomb in the Big Bend Dam. They will be reburied near the village with the proper solemnity and dignity for the dead. After wandering the Great Plains for a millennium, the victims will be home at last.



Rick Atkinson/staff

The bones of 500 Indians who were massacred six centuries ago lie in a mass grave by Lake Francis Case in southern South Dakota.

Kansas City Times

30 October 1980

Appendix A No. 2

Florida site may be first European-Indian village

By the Associated Press

Micco, Fla.—Homer Cato, an amateur archaeologist, believes he has come across an important find: the remains of what may be the first European-Indian settlement in the New World.

Close by Micco, Cato said, in a sub-tropical area just off U.S. 1, European survivors of offshore shipwrecks lived with a normally hostile Indian tribe. They married and had children years before Spaniards established St. Augustine, America's oldest city, in 1565.

But unless money can be raised at the eleventh hour to continue professional digging, the site near the Indian River in central Florida's Brevard County may be turned into a more contemporary nomadic village: an asphalt park for recreational vehicles.

Owners of the land containing a sprawling Ayz Indian village and burial mound—which may date back to 1200 A.D.—plan to bulldoze and excavate the site for commercial purposes.

The Ayz (pronounced "eyes") lived on the site, which has yielded skeletons, pottery, jewelry, early Indian and Spanish artifacts and—most unusual of all—crucifixion symbols hinting at Christian interment.

"I didn't discover this site," said Cato, a Micco land developer with a lifelong obsession for the past. "All I did was to interpret it."

He said he located the burial mound in 1966 on an outdated 19th century topographical map drawn by the U.S. Geodetic Survey. Obscure anthropological publications previously had referred to a possible village site in the area, but the presence of the mound and the European connection had been missed.

Though an amateur, Cato is an experienced, hard-working archaeologist who has spent years researching Spanish archives and historical accounts of Indians in Florida.

The presence of European artifacts in the burial mound was an indication to Cato that the Ayz, who practiced ceremonial head-hunting, also became the first treasure salvors in the New World. They recovered silver coins, semi-precious gems, medallions and other artifacts from wayward European galleons shipwrecked on the Atlantic beaches near their village.

But when Cato discovered a 12-foot-wide, 16-foot-long cross of conch shells across a segment of the mound, the site took on far greater implications.

His research in the Seville archives and old Spanish books turned up an account by Frenchman Rene Laudonniere, whose party rescued two Europeans from an Ayz tribe in 1564—a year before the founding of St. Augustine.

When the men were found, they were unclothed and had long hair and beards, indicating they had been with the tribe for some time.

The connotation was obvious, Cato believes: the normally fierce Ayz sometimes would collect shipwreck survivors as well as their treasures and take them into their lives. When they died, they were accorded a "Christian" burial with a cross.

Cato said this and findings of pottery and other artifacts made in Europe seemed to add up to one conclusion: this was the village mentioned in old Spanish records in which shipwrecked Europeans and Indians had lived—and died—together.

Earlier this year Cato convinced the owners of the land to make an archaeological survey of the site. They brought in Cultural Resource Management, a private archaeological firm.

Archaeologist Dave Swindell, who works for the firm, doesn't support or discount Cato's theory. It will take months to properly analyze the items now being uncovered, he said. But he also said he believes the six-acre site contains the most important Indian village and mound material found on the Atlantic Coast of Florida.

Kansas City Star

18 December 1980

Appendix A No. 2

Religious shrine of Stone Age discovered

Site is believed to be the oldest known to man

By Warren E. Leary
AP Science Writer

WASHINGTON — Scientists say they have unearthed mankind's oldest known religious shrine, a cave sanctuary containing an altar-like slab and an unusual sculpted stone head fashioned 14,000 years ago.

The well-preserved sanctuary, built in a cave by Stone Age men living in what is now northern Spain, also contained weapons, household tools and animal relics, the scientists reported Friday.

Leslie G. Freeman and Richard G. Klein, University of Chicago anthropologists, discovered the shrine at the El Juyo Cave archaeological site near the city of Santander.

Mr. Freeman said in a telephone interview that the find "is the oldest, intact, dedicated religious site we can prove in the world."

Evidence for religious belief goes back at least 50,000 years, he said, and includes cave drawings and gravesite offerings placed at Neanderthal burial sites.

"However, almost all of this evidence deals with death, which is only part of a religious belief system," Mr. Freeman said. "At El Juyo, this site has nothing to do with death. It's symbolism is more universal and tells us about other aspects of the belief system.

"For example, the fact that hunting weapons were kept separate from sewing implements in the sanctuary strongly suggests that the difference between male and female roles in the material culture was also important to the religious ceremonies."

The stone head is a particularly significant find because it portrays a face that is half human and half animal, a unique discovery for that era, the scientists said. "There is no other case in Paleolithic (Stone Age) art of a face divided by a midline into two halves, each with a different nature," Mr. Freeman said.

The free-standing stone sculpture is

See SHRINE, Page A-12, Col. 3

SHRINE

Continued from Page A-1

14 inches tall, 13 inches wide and 8 inches deep. The makers took a rock that had a natural vertical fissure and used this crack to divide the face. A horizontal crack across the lower part of the surface became the basis of a mouth on both sides.

On one side of the rock is the face of a smiling man with mustache and beard, the scientists said. On the other is the face of a cat with a muzzle, whiskers and a single, pointed tooth.

The sanctuary site is located in the bottom of hollow at the base of a hill. The El Juyo site was discovered more than 20 years ago, but abandoned after limited exploration until recently.

The American scientists and their Spanish colleagues, J. Gonzalez Echegaray of the Altamira Museum and I. Barandiaran of the University of Santander, broke through the cave wall and found the sanctuary, occupying a 118-square-foot area.

At the center was a shallow trench, 43 inches long and 31 inches wide, filled with layers of animal bones, shells, spearpoints and colored stone material.

Atop the trench was a clay-capped mound 30 inches high that contained carefully arranged layers of earth, burnt vegetation, animal remains and colored material. A smaller mound, surrounded by stones that included the sculptured head, lay to the side of the larger one.

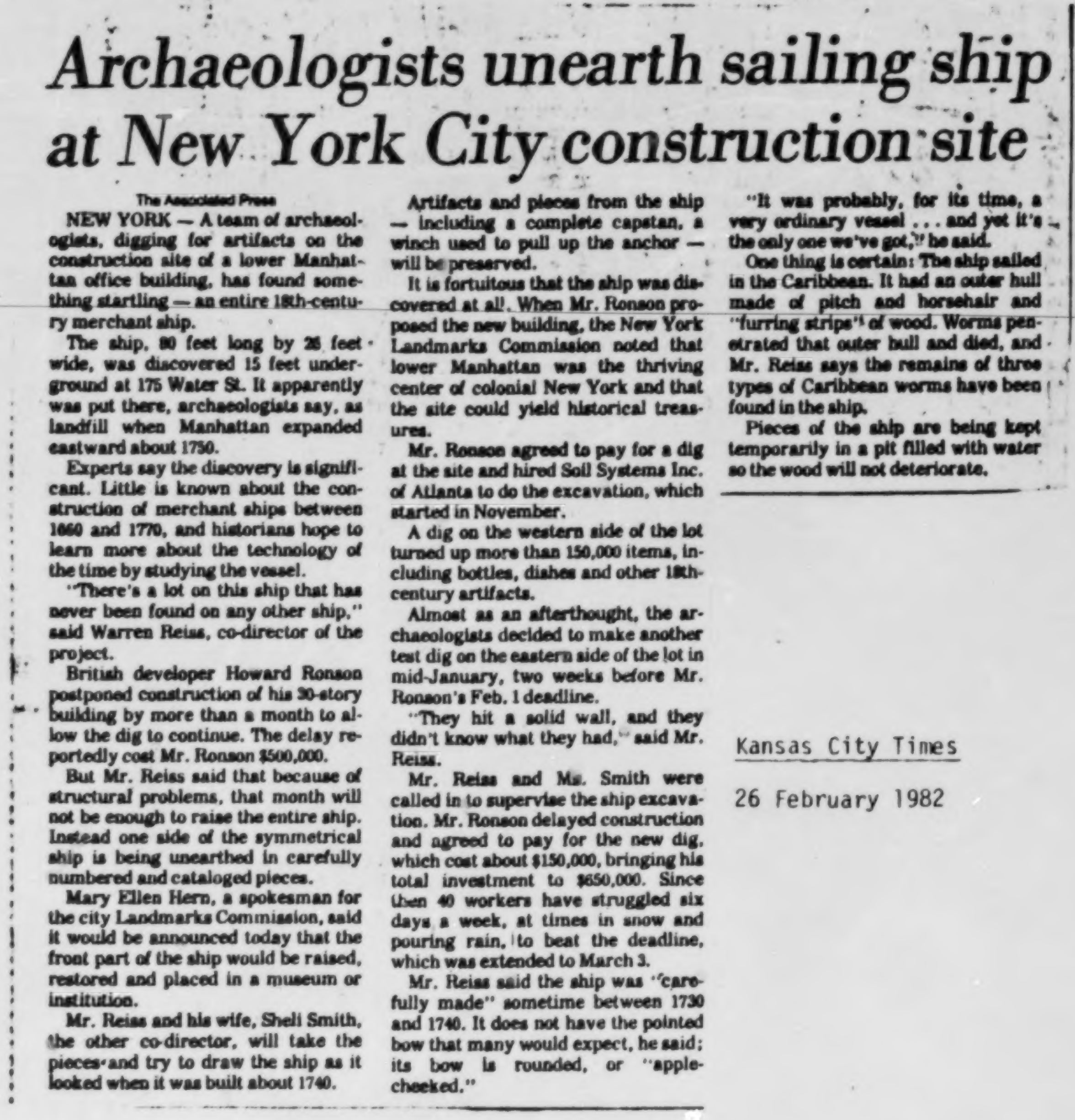
Kansas City Times

28 November 1981

Appendix A No. 2

"Flower Fossils May be the Oldest Found Yet" from the December 25, 1981 edition of the Kansas City Times has been removed due to copyright restrictions.

Appendix A No. 2



Archaeologists unearth sailing ship at New York City construction site

The Associated Press

NEW YORK — A team of archaeologists, digging for artifacts on the construction site of a lower Manhattan office building, has found something startling — an entire 18th-century merchant ship.

The ship, 80 feet long by 26 feet wide, was discovered 15 feet underground at 175 Water St. It apparently was put there, archaeologists say, as landfill when Manhattan expanded eastward about 1750.

Experts say the discovery is significant. Little is known about the construction of merchant ships between 1660 and 1770, and historians hope to learn more about the technology of the time by studying the vessel.

"There's a lot on this ship that has never been found on any other ship," said Warren Reiss, co-director of the project.

British developer Howard Ronson postponed construction of his 30-story building by more than a month to allow the dig to continue. The delay reportedly cost Mr. Ronson $500,000.

But Mr. Reiss said that because of structural problems, that month will not be enough to raise the entire ship. Instead one side of the symmetrical ship is being unearthed in carefully numbered and cataloged pieces.

Mary Ellen Hern, a spokesman for the city Landmarks Commission, said it would be announced today that the front part of the ship would be raised, restored and placed in a museum or institution.

Mr. Reiss and his wife, Sheli Smith, the other co-director, will take the pieces and try to draw the ship as it looked when it was built about 1740.

Artifacts and pieces from the ship — including a complete capstan, a winch used to pull up the anchor — will be preserved.

It is fortuitous that the ship was discovered at all. When Mr. Ronson proposed the new building, the New York Landmarks Commission noted that lower Manhattan was the thriving center of colonial New York and that the site could yield historical treasures.

Mr. Ronson agreed to pay for a dig at the site and hired Soil Systems Inc. of Atlanta to do the excavation, which started in November.

A dig on the western side of the lot turned up more than 150,000 items, including bottles, dishes and other 18th-century artifacts.

Almost as an afterthought, the archaeologists decided to make another test dig on the eastern side of the lot in mid-January, two weeks before Mr. Ronson's Feb. 1 deadline.

"They hit a solid wall, and they didn't know what they had," said Mr. Reiss.

Mr. Reiss and Ms. Smith were called in to supervise the ship excavation. Mr. Ronson delayed construction and agreed to pay for the new dig, which cost about $150,000, bringing his total investment to $650,000. Since then 40 workers have struggled six days a week, at times in snow and pouring rain, to beat the deadline, which was extended to March 3.

Mr. Reiss said the ship was "carefully made" sometime between 1730 and 1740. It does not have the pointed bow that many would expect, he said; its bow is rounded, or "apple-cheeked."

"It was probably, for its time, a very ordinary vessel . . . and yet it's the only one we've got," he said.

One thing is certain: The ship sailed in the Caribbean. It had an outer hull made of pitch and horsehair and "furring strips" of wood. Worms penetrated that outer hull and died, and Mr. Reiss says the remains of three types of Caribbean worms have been found in the ship.

Pieces of the ship are being kept temporarily in a pit filled with water so the wood will not deteriorate.

Kansas City Times

26 February 1982

Appendix A No. 2

Kansas City Times

13 September 1982

Farm land turns up some large-scale art

Earthen snake believed to be Indians' work

By Lynn O'Shaughnessy
Of the Mid-America Staff

LYONS, Kan. — For more than 50 years a Rice County farmer noticed something peculiar about a sliver of land that slithered across his prairie. The usual tall, wild grasses refused to grow on the patch and it dipped into the ground for no apparent reason.

Someone with an active imagination suggested that the configuration resembled the shape of trenches dug at the battle of Gettysburg. Some dismissed it as a quirk of nature. Others, including the farmer's wife, thought that the only quirk was in the farmer's head.

Apparently they were all wrong. The prairie version of a lawn decoration looks a lot like a 150-foot earthen serpent. The "creature," which rests on a ridge several miles outside of Lyons, appears to be holding a ball or egg in its jaws.

The serpent probably was dug into the earth several hundred years ago by the Quivira Indians, who are best-known for trying to bamboozle the Spanish explorer Francisco Vasquez de Coronado during his fruitless search for gold.

The mystery was cracked by Clark Mallam, the director of the Archaeological Research Center at Luther College in Iowa and a member of the Smithsonian Institution archaeology team during past digs at Indian sites. Mr. Mallam hit upon the serpent theory suddenly after pacing across the spot several times.

"The more I looked at it the more I tended to believe it was a serpent form," he said. "Finding one out here in Kansas is really unusual. We never expected it."

The serpent, in fact, has the distinction of being the first one discovered in Kansas. Indian dirt animals generally are found only in what is called the upper Mississippi River

See SNAKE, Page A-4, Col. 1

SNAKE

Continued from Page A-1

region, and most of those have been fashioned by heaping dirt into mound artwork rather than scooping out the earth and forming a reverse cameo. Technically the Lyons creature and other submerged animals are called intaglios.

Local residents have welcomed the news of the serpentine figure with great enthusiasm.

"More people have been snake-bit here than you can imagine," chuckled the 59-year-old farmer who now owns the snake. His identity is being kept a secret, if that is possible in a small town, to prevent a stampede of serpent watchers from invading the pasture and inadvertently letting out the cows.

Actually the discovery holds a special meaning for county residents because for many of them archaeology is not a dull subject they left behind in school. The area is called Coronado Country, and since the 1940s the Smithsonian Institution and the Kansas Historical Society have sponsored a half-dozen archaeological digs in the county to learn more about the Quivira Indians and Coronado's visit. Even the county museum recently was renamed the Coronado-Quivira Museum.

To give some idea of just what sort of place Rice County is, the status symbol in these parts is owning a piece of chain-link armor left behind by Coronado's entourage during its visit to the area in 1541.

(Coronado and his men wandered into what is now Lyons after being directed there by Indian tribes in New Mexico that wanted to get rid of the conquistador, who was bent on finding gold. The Quivira Indians also tried to deceive Coronado by directing him farther north, but he finally caught on and returned to Mexico in disgrace.)

With Rice County proving to be a mother lode of Indian artifacts, it is hardly surprising that many farmers and townsfolk own relics of the Quiviras, who lived in central Kansas from 1400 to 1700, when they were chased into Texas by warlike nomadic tribes.

The granddaddy of the collectors is Kermit Hayes, a 72-year-old farmer who has collected more than 1,600 artifacts on his property. He displays them in his museum on the second floor of his house. He also rescued the foundation of a Quivira house that the Smithsonian archaeologists, including Mr. Mallam, excavated in 1971.

The team was going to cover the remains of the grass hut, but Mr. Hayes interceded and built a corrugated shed over it. Now up to 300 people a year visit the shed, which sits next to a milo field, and listen to some Indian lore after signing the "Kermit Hayes Pit House Guest Book."

Mr. Hayes' unabashed excitement over the snake discovery is typical.

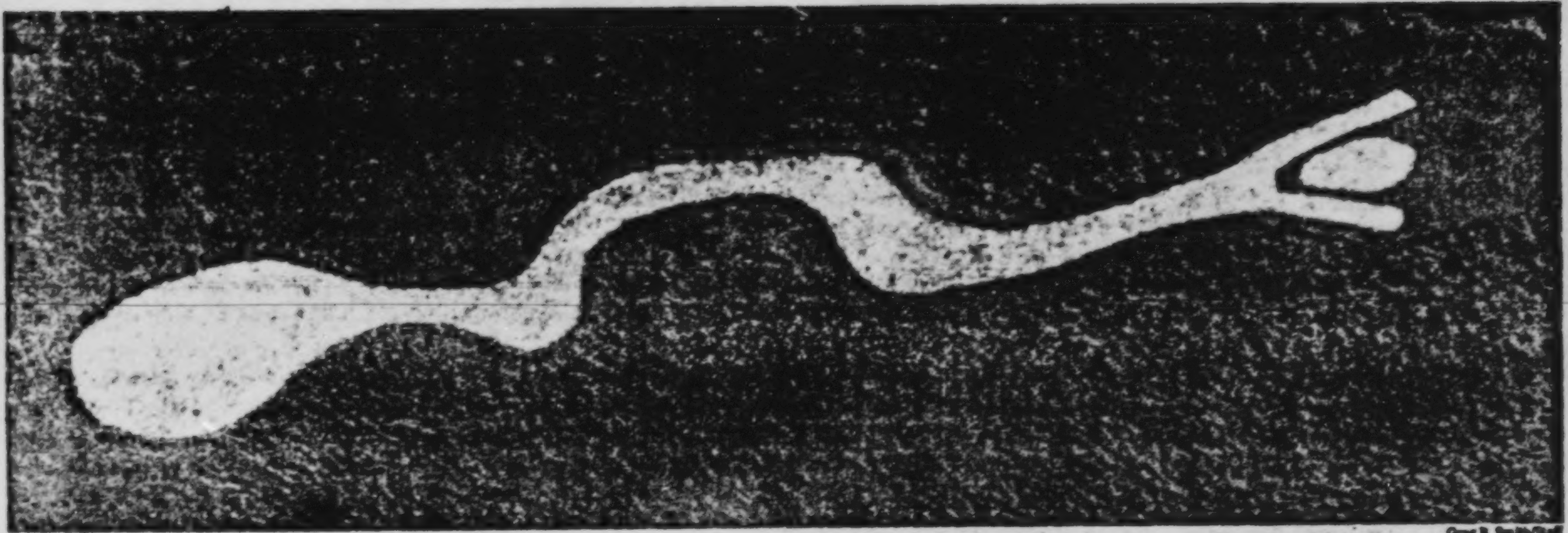
"It's going to be quite an interesting year out here," he said. "I can't wait to see what happens. Who knows what's to be discovered in these native prairies? I've been saying for the past 10 years we've probably just scratched the surface."

Yet anybody expecting this mysterious serpent to exhibit lifelike qualities is bound to be disappointed. To the untrained eye the stubbly grass covering the serpent area looks more like a front lawn. To get a better idea of just what is out there, Mr. Mallam and a group of "snake-bit" farmers gathered early Friday to cover the serpent with lime. Later in the day photographers in an airplane snapped pictures of the serpent, which viewed from 1,500 feet overhead stuck out in the pasture much like Christmas lights would on the Fourth of July.

What the Indians had in mind when they dug the serpent still is a mystery. Mr. Mallam, who is spending a sabbatical year in the county thanks to a grant from the Rice County Historical Society and the Kansas Committee for the Humanities, hopes to find out more when he excavates a portion of the serpent later this year. What intrigues the archaeologist is the fact that the serpent's jaws point to the three known Quivira council circles, which are believed to have been religious gathering spots and living quarters for the elite.

Mr. Mallam, however, hesitated to offer theories about why the serpent exists.

"One might even be tempted to say this is a protective symbol," he said. "Notice I said 'tempted.' We don't know for sure."



Greg B. Smith/Staff

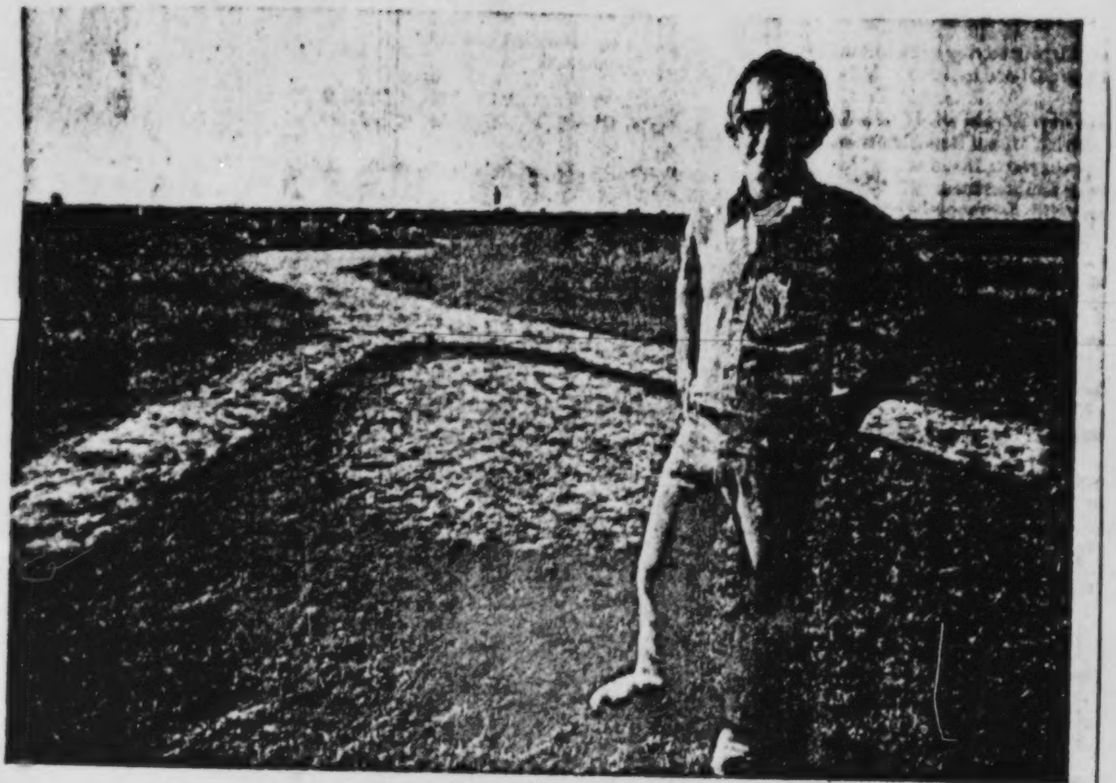
Viewed from the air, the earthen snake near Lyons, Kan., takes shape. Quivira Indians may have made the figure.

Kansas City Times

13 September 1982

Appendix A No. 2

Appendix A No. 2



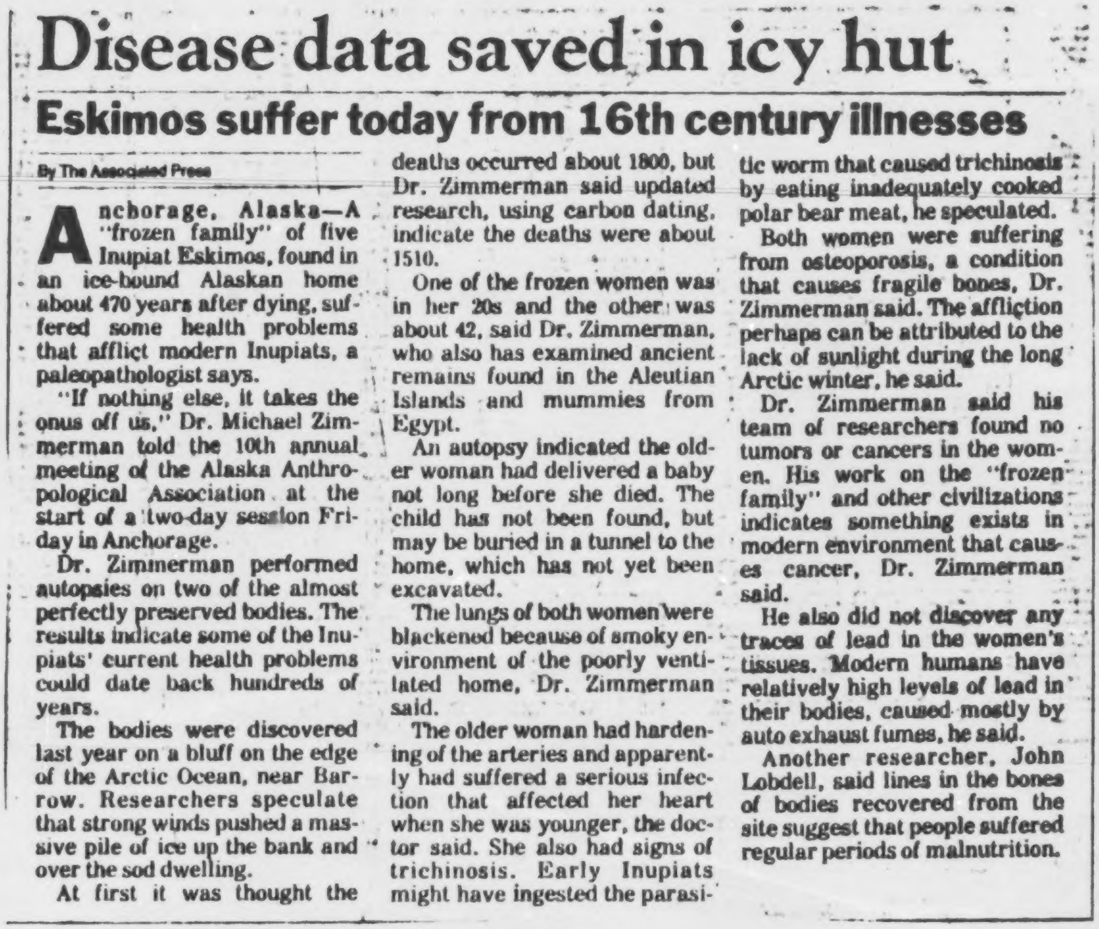
Greg B. Smith/Staff

Archaeologist Clark Mallam stands near the mouth of the serpent, which has been highlighted with lime. The oval shape between the jaws could represent a ball or an egg.

Kansas City Times

13 September 1982

Appendix A No. 2



Disease data saved in icy hut

Eskimos suffer today from 16th century illnesses

By The Associated Press

Anchorage, Alaska—A "frozen family" of five Inupiat Eskimos, found in an ice-bound Alaskan home about 470 years after dying, suffered some health problems that afflict modern Inupiats, a paleopathologist says.

"If nothing else, it takes the onus off us," Dr. Michael Zimmerman told the 10th annual meeting of the Alaska Anthropological Association at the start of a two-day session Friday in Anchorage.

Dr. Zimmerman performed autopsies on two of the almost perfectly preserved bodies. The results indicate some of the Inupiats' current health problems could date back hundreds of years.

The bodies were discovered last year on a bluff on the edge of the Arctic Ocean, near Barrow. Researchers speculate that strong winds pushed a massive pile of ice up the bank and over the sod dwelling.

At first it was thought the deaths occurred about 1800, but Dr. Zimmerman said updated research, using carbon dating, indicate the deaths were about 1510.

One of the frozen women was in her 20s and the other was about 42, said Dr. Zimmerman, who also has examined ancient remains found in the Aleutian Islands and mummies from Egypt.

An autopsy indicated the older woman had delivered a baby not long before she died. The child has not been found, but may be buried in a tunnel to the home, which has not yet been excavated.

The lungs of both women were blackened because of smoky environment of the poorly ventilated home, Dr. Zimmerman said.

The older woman had hardening of the arteries and apparently had suffered a serious infection that affected her heart when she was younger, the doctor said. She also had signs of trichinosis. Early Inupiats might have ingested the parasitic worm that caused trichinosis by eating inadequately cooked polar bear meat, he speculated.

Both women were suffering from osteoporosis, a condition that causes fragile bones, Dr. Zimmerman said. The affliction perhaps can be attributed to the lack of sunlight during the long Arctic winter, he said.

Dr. Zimmerman said his team of researchers found no tumors or cancers in the women. His work on the "frozen family" and other civilizations indicates something exists in modern environment that causes cancer, Dr. Zimmerman said.

He also did not discover any traces of lead in the women's tissues. Modern humans have relatively high levels of lead in their bodies, caused mostly by auto exhaust fumes, he said.

Another researcher, John Lobdell, said lines in the bones of bodies recovered from the site suggest that people suffered regular periods of malnutrition.

Kansas City Star

12 March 1983, p. 7A.

Appendix A
No. 2

"Bandits Razing History in Raids on Indian Sites" from the March 13, 1983 edition of the Kansas City Star has been removed due to copyright restrictions.

Archaeologists learn from ground up

By WILF BENNETT
Province Education Reporter

One group of Simon Fraser University students, far removed from their lively and sometimes controversial campus, is digging hard for an education this summer.

Twelve archaeology students, under the direction of anthropology prof. Roy Carlson, are probing the earliest human history of this region by excavating ancient Indian and pre-Indian village sites on the Salish reserve on the northwest corner of Mayne Island.

Already, says Carlson, they have uncovered new information on human settlement earlier than any previously proven in this region — artifacts indicating that the site was peopled as long as 5,000 years ago — about 3,000 B.C.

The students, who will finish this outdoor "laboratory" part of their course July 19, have found, identified and tagged more than 2,000 artifacts.

They include the weapons, tools and ornaments of the early fish-eating, hunting Salish and pre-Salish people —.including such things as stone knives, spearheads, arrowheads, fish barbs, dart points, adze blades, whetstones, harpoon heads, herring rakes and ornaments.

Most are made of native black basalt, though some are of shiny obsidean or jade-like nephrite, which must have been brought or traded down the Fraser River from the interior.

The students, who have been working on the Mayne Island site since May 15, near the beginning of SFU's summer semester, have excavated an entire village — or rather a series of three successive villages extending upward from the beach at Helen Point on Mayne. The oldest — about 3000 B.C. — is highest up the bank, Dr. Carlson says.

As a result of their two months of laborious shovelling, the site is now a big honeycomb of exposed areas.

Tents of the "expedition" can be seen by ferry travellers through Active Pass — on the south of Mayne Island side across from Galiano, near the western end of the pass. It's the area where the large controversial signboard stood for several years; it has now been taken down.

It's a regular full-credit course in archaeology — No. 372-5 — not just a trip or a summertime job for students. The students pay the regular term tuition fee, supply their own bedding, with the university supplying food and tents.

After they come back to the SFU campus July 22 they'll evaluate and record their results, and write papers and final exams.

This Sunday they're holding an open house for parents and others interested. The site can only be reached by a narrow foot trail from Village Bay, on Mayne's west side, or by small boat. There is no pier, though some shacks of the last Indian village still stand.

Frazer Smith, a Salish boy from Brentwood, direct descendant of the tribe, is helping the students.

When Province photographer Gordon Sedawie and I visited them Thursday they were having, unfortunately for them and us, their first full day of cold rain in weeks.

But, attired in a varied assortment of rain clothes, they continued their scooping, shovelling and sifting.

The site is a midden, an accumulation of thousands of years of the tribe's garbage. Over the years it has become a deposit of rather oily black ashes and dirt, with many shells and occasionally artifacts.

All this has to be carefully sifted through coarse screens in the search for the artifacts. The resulting "slag heaps" are now nearly six feet high.

Once found, Nancy Lowry, a third year archaeology student and former model from Calgary, carefully handletters an identification number on the item and in a record book.

Most of the students, like James Baker of Lytton, Sandy Schurman of West Vancouver, Lynn Lunde of Edmonton and Richard Percy of Vancouver, are seniors who intend to go on to university teaching, museum work or further archaeological research.

The field is wide open, according to Dr. Carlson, who came to SFU by way of Washington, Arizona and Egypt, for there is yet no published study on the pre-Indian or prehistoric people of B.C.'s Lower Mainland.

The Mayne community was one of a series of pre-history "cities" including such others as those at Marpole, Locarno, Gabriola Island, Saanich peninsula, Montague Bay, Cape Mudge and some in the U.S. San Juan islands.

SFU Archaeology Prof. Phil Hobler, who visited the Mayne site Thursday, has been conducting summer explorations around Bella Coola, Bella Bella and the Chilcotin trying to ascertain how far northward the Salish people extended. He is staking out sites for future "outdoor laboratories" of this type.

Other students on the Mayne project are Arnold Stryde of Ladner, Doris Leggett of Vancouver, John Davies of Burnaby, Grant Dickinson of Abbotsford, Ann Tighe of North Vancouver, John McMurdo of Port Moody and Hudson Palmer of Vancouver.

A University of B.C. anthropology student, Kathy Jamieson of Vancouver, has the big job of cooking for the SFU diggers all summer.

The Province

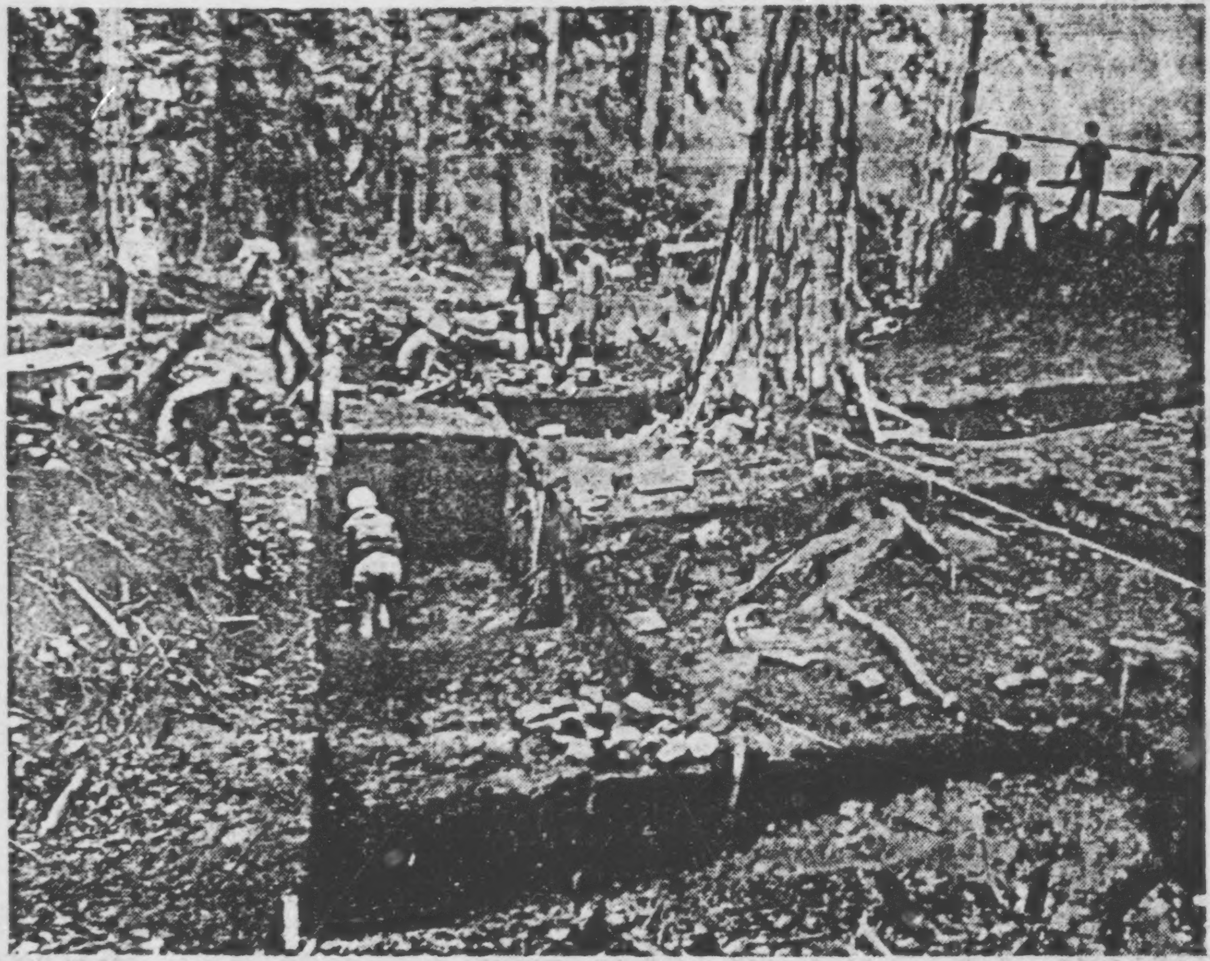
13 July 1968

Appendix A
No. 3

Nancy Lowry marks artifacts and records them along with identification number.

The Province

13 July 1968



Site of excavation of pre-Indian village on the Salish reserve on the northwest corner of Mayne Island.

DR. ROY CARLSON ... leader of expedition.

Appendix A No. 3

The Province, 13 July 1968

Appendix A No. 3

Diggers set to unearth city on Nile

By Nicolas B. Tatro
The Associated Press

CAIRO, Egypt — A West German archaeological team set out Friday to excavate a 3,000-year-old city in the Nile delta where a pharaoh, Ramses II, is believed to have held Israelites prisoner.

"There is a possibility that there is a connection between this place and the ancient Israelites, some of whom may have participated in the exodus," Dr. Arne Eggebrecht, head of the six-member team and director of the Pelizaus Museum in Hildesheim, said.

He said the expedition hopes to confirm the location of the ancient Egyptian capital of Ramses mentioned in the *Bible* and establish any connection with Hebrew tribes.

Columns, tiles and stone tablets bearing the names of the king and a soldier named Musa, or Moses, were found in the 1930s and indicate Tell el Daba'a was the site of Ramses' city. But the ruins have never been excavated.

Working on a $140,000 grant from the West German government, the expedition plans to spend two months exploring the site near the modern town of Kantir, 120 miles northeast of Cairo. If the results are promising, Eggebrecht said, the team hopes to return for several more seasons of digging.

Ramses II, one of the most powerful Egyptian pharaohs, ruled for more than six decades beginning about 1290 B.C. He was the first Middle East leader known to have signed a peace treaty — with the Hittites in 1250 B.C. His mummy is on display in the Cairo museum.

The city that bears his name is mentioned in the Old Testament book of Exodus and Eggebrecht said biblical references indicate it may be the place where Ramses forced his Hebrew prisoners to make mudbricks.

The city was built next to the remains of the capital constructed by the mysterious Hyksos invaders who conquered Egypt about 1650 B.C. and who were expelled after being defeated about a century later.

"Ramses apparently chose the site of the former Hyksos capital to demonstrate to his rivals in the Palestine and Syrian area that Egypt was the most powerful land in the area," Eggebrecht said.

The Hyksos are believed to have been Semites from the land of Canaan in what now is Syria, Lebanon and Israel, according to Dr. Manfred Bietak, an Austrian archaeologist. He is excavating the Hyksos capital, Auaris, near Tell el Daba'a, where the German operation is starting.

Ruins of the two cities are spread over an area about three miles square. Bietak said Ramses' palace is believed to be under what now is farmland.

Kansas City Times

1 March 1980

Luck o' the Irish

Emerald Isle lets loose her riches as sleuth unearths 'find of century'

By William Borders
New York Times News Service

KILLENAULE, Ireland — An amateur treasure hunter, digging through a brown bog here in County Tipperary, has made what archaeological experts are referring to excitedly as "the find of the century."

The uncovered treasure, an eighth-century communion set, including an intricately filigreed gold and silver chalice, is comparable to the Ardagh Chalice and the Book of Kells, two other Irish artifacts from the same period, according to archaeologists.

"No one has found so fine a composite set of altar furnishings before," said Brendan O'Riordain, the director of the National Museum of Ireland in Dublin, 70 miles northeast of here. "It gives us an invaluable insight into the high level of craftsmanship of the period, as well as the way its religious life was conducted."

According to O'Riordain, the communion set probably was buried to keep it from being stolen by plunderers, either the Viking invaders who stormed across Ireland in the Middle Ages or thieves from a rival monastery.

Apparently it lay undisturbed just a few inches below the ground for 1,000 years until the cold and cloudy day last month when it was found by an Irish weekend explorer with a hand-held metal detector.

At his own request, the man's identity has not been disclosed. The ancient treasure troves law makes the priceless communion set automatically the property of the government. But the man who found it, who voluntarily took it to the museum in Dublin, will be paid a "substantial" award, O'Riordain said.

The discovery, which was made public just last week, reflects a golden period in Ireland's past. The *Irish Times* said Thursday in an editorial:

"It is not just the aesthetic value of the objects which draws the eyes of the country. The board is seen as a key to our past. Who are we? What does this tell us about ourselves?"

Crowds of Dubliners are lining up to file past the communion set at the National Museum, where it went on display this week. After public interest dies down a bit, the set will be sent to the British Museum in London for cleaning and restoration, a delicate task that may take a year.

But it is in remarkably good shape now, except for a patina acquired from the large bronze basin that was placed over it for protection by whoever hid it here a thousand years ago.

The central piece, the chalice, is decorated with panels of very delicate gold filigree and amber settings, and has handles with elegantly ornamented escutcheons, or shields. The other pieces in the set are a strainer, made of gilt bronze, in the form of a ladle; a 14-inch paten, or circular tray, with gold filigree and glass studs, and a circular stand for the paten, elaborately decorated with interlace designs.

According to the museum director, a particularly fine feature of the paten is the extensive use on it of so-called "trichonopoly work," a knitted mesh of silver wire that forms the rims and edges of its decorative band.

Here at the discovery site, near a long-abandoned monastery on a 25-acre island in a desolate swamp, guards have been posted to keep away the curious as four archaeologists dispatched from Dublin carefully continue the exploration.

"There's never been so much traffic through this part of County Tipperary," said Kitty Flaherty, who runs a fish and chips shop near the main road to Dublin.

Although the man who made this archaeological find acted "responsibly" in the Dublin museum director's opinion, other amateurs with metal detectors have not, and the discovery has refueled a controversy over treasure hunting, a rapidly growing hobby here and in Britain.

"The treasure hunter is only interested in objects," said Henry Cleere, director of the Council for British Archaeology. "By removing objects from their context they deprive us of much valuable information."

Kansas City Star

14 March 1980

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Appendix A
No. 3

"Scorpion Tracks Alter Theory" from the April 10, 1980 edition of the _Kansas City Star_ has been removed due to copyright restrictions.

Appendix A No. 3

Kansas City Times , Monday Oct. 26, 1981, Volume 114

Digging deeper into man's origin

By Robert Carroll
A Member of the Staff

BOOKS OF THE DAY

THE MAKING OF MANKIND, by Richard E. Leakey (256 pages; E.P. Dutton; $24.95).

In 1978, Richard Leakey and a science writer named Roger Lewin published *People of the Lake: Mankind and Its Beginnings*, a summary of Mr. Leakey's findings as a paleoanthropologist digging on the shore of Lake Turkana in the Great Rift Valley of East Africa. It revealed his conclusions about the development of man and society.

A lot of things have happened in the field since then and apparently Mr. Leakey has decided to bring out a revision, under his name alone. Also, it would seem he has made a TV series in connection with the new book, although it is not clear which evolved from the other.

One of the things that has happened since 1978 is Donald Johanson's publication earlier this year of *Lucy*, in which he proposes that a small hominid whose fossils he found in the Afar region of Ethiopia belonged to a previously unknown species. He named it *Australopithecus afarensis* and said it was an ancestor to the *Homo* line that led to *Homo sapiens*, or man.

In *Lucy*, Mr. Johanson writes of an attack by the Leakey family, Richard and his mother, Mary Leakey, on his view because it conflicts with their position that *Homo* was separate from the *Australopithecus* line. That view was developed by the founder of the dynasty, Louis Leakey.

In his new book, Richard Leakey, with the composure that befits his established position, treats the disagreement with Mr. Johanson as simply the give-and-take in which scientists seek the truth; he evinces no hard feelings.

The Making of Mankind takes us far beyond what one might think of as Leakey country, the East Africa of a couple of million years ago. The TV series presumably will include shots of Mr. Leakey lecturing while strolling on the banks of the Neander River, which gave its name to the Neanderthal man, or scrambling about the caves decorated by Ice Age artists.

The book focuses on Mr. Leakey's view of the importance of food sharing in the evolution of humanity, as proposed by his friend and colleague Glynn Isaac. Mr. Leakey examines what are traditionally called hunter-gatherer societies, although, in view of the great preponderance of plant food gathered by the women while the men were off on their usually fruitless hunting trips, he once preferred the term gatherer-hunters. Mr. Leakey finds the sharing of food to be a peculiarly human trait among primates — social carnivores such as dogs share their food but lower primates such as chimpanzees and baboons do not.

Mr. Leakey says the fossil record supports the hunting hypothesis — that man evolved from a "killer ape," that it was the slaughtering of other living things for food that molded human nature. But, he argues, that is because the butchering of meat by creatures with such inadequate teeth as man's early ancestors called for tools — chipped stones that endure, along with the fossilized bones of some small fraction of the creatures that were hacked apart. Nuts, roots and berries can be gathered with nothing but a digging stick and a bark basket, he says, neither of which leaves a trace millions of years later.

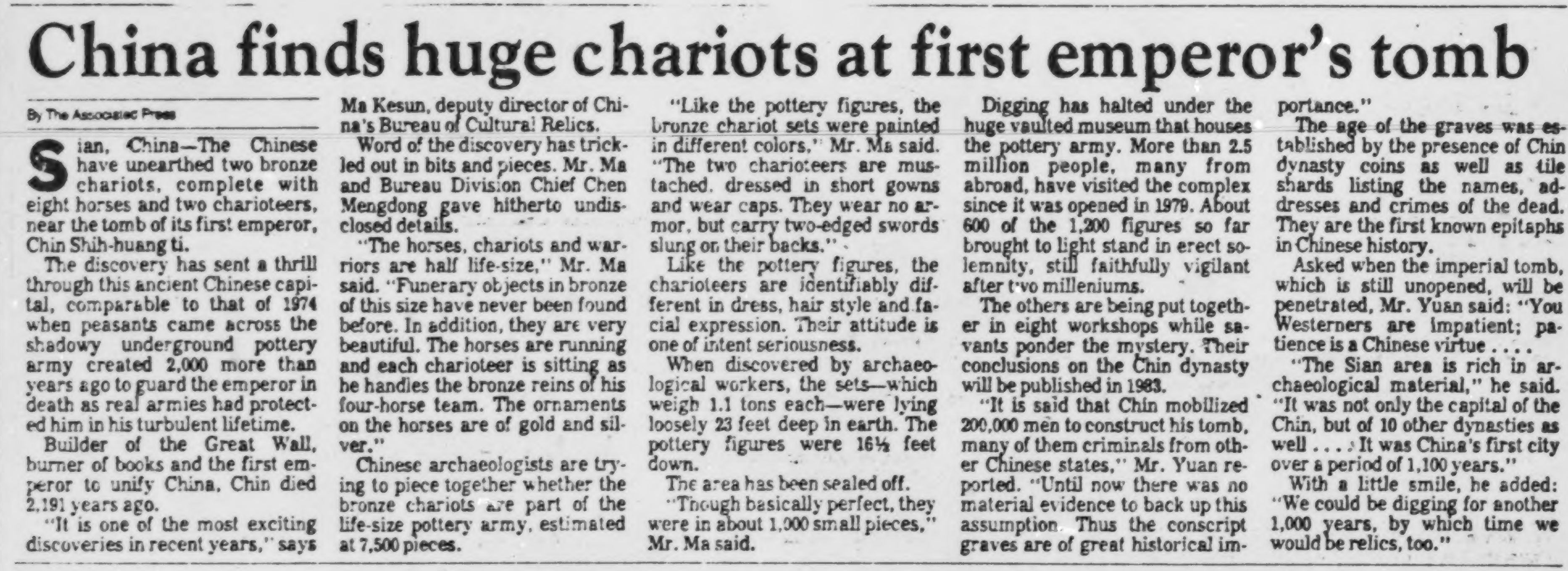
Microscopic examination of wear patterns on fossil teeth and chipped tools one day may settle questions of what hominids were eating a few million years ago, Mr. Leakey hopes, and of whether they used their flint edges to whittle digging sticks as well as to slice raw meat.

His arguments are persuasive and well presented. The long-term implications, of course, are more hopeful than those of the killer-ape theory.

A small irony pops into mind here. The secret — or blatant — goal of hundreds of thousands of writers, painters, politicians and even paleoanthropologists is to leave behind a work future generations will know. Here these scruffy, anonymous, half-human chippers of stone and carvers of bone have succeeded where 99 percent of the ambitious men of our century will fail.

Kansas City Times

26 October 1981



China finds huge chariots at first emperor's tomb

By The Associated Press

Sian, China—The Chinese have unearthed two bronze chariots, complete with eight horses and two charioteers, near the tomb of its first emperor, Chin Shih-huang ti.

The discovery has sent a thrill through this ancient Chinese capital, comparable to that of 1974 when peasants came across the shadowy underground pottery army created 2,000 more than years ago to guard the emperor in death as real armies had protected him in his turbulent lifetime.

Builder of the Great Wall, burner of books and the first emperor to unify China, Chin died 2,191 years ago.

"It is one of the most exciting discoveries in recent years," says Ma Kesun, deputy director of China's Bureau of Cultural Relics.

Word of the discovery has trickled out in bits and pieces. Mr. Ma and Bureau Division Chief Chen Mengdong gave hitherto undisclosed details.

"The horses, chariots and warriors are half life-size," Mr. Ma said. "Funerary objects in bronze of this size have never been found before. In addition, they are very beautiful. The horses are running and each charioteer is sitting as he handles the bronze reins of his four-horse team. The ornaments on the horses are of gold and silver."

Chinese archaeologists are trying to piece together whether the bronze chariots are part of the life-size pottery army, estimated at 7,500 pieces.

"Like the pottery figures, the bronze chariot sets were painted in different colors," Mr. Ma said. "The two charioteers are mustached, dressed in short gowns and wear caps. They wear no armor, but carry two-edged swords slung on their backs."

Like the pottery figures, the charioteers are identifiably different in dress, hair style and facial expression. Their attitude is one of intent seriousness.

When discovered by archaeological workers, the sets—which weigh 1.1 tons each—were lying loosely 23 feet deep in earth. The pottery figures were 16½ feet down.

The area has been sealed off.

"Though basically perfect, they were in about 1,000 small pieces," Mr. Ma said.

Digging has halted under the huge vaulted museum that houses the pottery army. More than 2.5 million people, many from abroad, have visited the complex since it was opened in 1979. About 600 of the 1,200 figures so far brought to light stand in erect solemnity, still faithfully vigilant after two milleniums.

The others are being put together in eight workshops while savants ponder the mystery. Their conclusions on the Chin dynasty will be published in 1983.

"It is said that Chin mobilized 200,000 men to construct his tomb, many of them criminals from other Chinese states," Mr. Yuan reported. "Until now there was no material evidence to back up this assumption. Thus the conscript graves are of great historical importance."

The age of the graves was established by the presence of Chin dynasty coins as well as tile shards listing the names, addresses and crimes of the dead. They are the first known epitaphs in Chinese history.

Asked when the imperial tomb, which is still unopened, will be penetrated, Mr. Yuan said: "You Westerners are impatient; patience is a Chinese virtue . . . .

"The Sian area is rich in archaeological material," he said. "It was not only the capital of the Chin, but of 10 other dynasties as well . . . . It was China's first city over a period of 1,100 years."

With a little smile, he added: "We could be digging for another 1,000 years, by which time we would be relics, too."

Kansas City Star

3 January 1982

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K.C Times, Nov. 14, 1981

Finds in Africa shed new light on use of fire by humans' ancestors

The New York Times

NEW YORK — New discoveries at an archaeological site in Kenya appear to push back by almost a million years the horizon of the first use of fire by the ancestors of modern humans.

Heretofore the earliest strong evidence of fire was in association with a few sites such as that at Choukoutien, China, dated about 500,000 years ago. The new finds in Kenya are estimated to be approximately 1.4 million years old.

The use of fire is the quintessence of the human condition, even more so than the use of tools because some animals use sticks as primitive tools but none, other than man, uses fire at all.

The finds from digs in Chesowanja, Kenya, include primitive stone tools and evidence of ancient fire in the form of small pieces of baked clay found in close association with the tools and animal bones. The tools were of kinds thought to have been used by Homo erectus, direct ancestors of modern humans and known to have lived in Africa more than a million years ago.

Physical tests of the ancient burned material suggested strongly that it was baked in small, probably controlled, fires such as campfires rather than in natural conflagrations, according to a report in the Nov. 12 issue of *Nature*, a weekly British scientific journal.

"Although natural phenomena such as brush fires, lightning strikes and even volcanic heating could explain the burnt clay at Chesowanja, we are convinced, from examination of the whole occurrence in situs, that hominid activity is a much more likely explanation," the report said.

More than 40 pieces of burnt clay were found ranging in size from tiny flecks to pieces 2 or 3 inches across. The physical tests indicate that the clay was baked in fires that did not get hotter than about 400 degrees centigrade (752 degrees Fahrenheit). This is a heat level to be expected from open campfires, the report said.

In each case the pieces of burned clay were found thoroughly intermingled with the stone tools and animal bones. The scientists concluded that

See FIRE, Page A-8, Col. 4

FIRE

Continued from Page A-1

the clay could not have been introduced into the site after its formation.

"The possession of fire is a major component of cultural behavior and is universal in recent times even among hunters and gatherers," said the authors, but they added that evidence of fire had been rare in more ancient sites.

There has been some circumstantial evidence from deposits at a few other sites dated about 1,300,000 years ago, but the authors of the new report described that evidence as "inconclusive."

"The new find, together with the more tentative evidence from other sites, greatly strengthens the hypothesis that by 1.4 Myr (1,400,000 years ago) hominids were using and controlling fire," the report said.

In other words these ancient ancestors of modern humans were already using two of the attributes most intimately linked to humanity: the ability to use tools and to control fire.

The authors of the report are J.A.J. Gowlett of Oxford University; J.W.K. Harris of the University of Pittsburgh, now at the University of Wisconsin; Derek Walton of McMaster University, Hamilton, Ontario; and B.A. Wood of Middlesex Hospital Medical School, London.

Homo erectus was presumably the fire-using species found at Choukotien in China and at the few other known sites of about 500,000 years old. The authors of the new report said the most reasonable hypothesis is that Homo erectus was also the fire user in Kenya at the far earlier time, but no fossil remains of these ancient hominids have actually been found at Chesowanja.

Instead, anthropologists have found there traces of other ancient hominids called Australopithecus, extinct species not considered directly related to the human lineage.

The authors said the evidence was strongly against the view that Australopithecus was the fire builder at the ancient Kenya site, but they acknowledged that this conclusion makes it difficult to explain what these ancient hominids were doing there. Australopithecus, having a brain capacity estimated at only about three-quarters that of Homo erectus, became extinct roughly a million years ago.

There seem to be only two possible explanations for the presence of Australopithecus in close association with the tools and traces of fire at Chesowanja, the research group concluded. One is that it was a chance association based simply on the fact that species of Australopithecus did live in that region at that time. The other is that the remains of these ancient hominids were brought to the site, along with those of other animals by the makers of the fire and the artifacts found there. This could be a hint that Homo erectus occasionally ate its distant hominid relatives, but the authors did not mention that possibility directly.

Kansas City Times

14 November 1981

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Appendix A No. 3

Legacy of Vesuvius: Second chapter

By The Associated Press

Washington—Scholars have thought that when Mount Vesuvius buried the Roman city of Pompeii and much of its population, the people of neighboring Herculaneum escaped. It now appears many did not make it.

Scientists have discovered more than 80 remarkably well-preserved human skeletons in the ruins of Herculaneum, and they suspect hundreds more might lie beneath the volcanic debris, the National Geographic Society announced Tuesday.

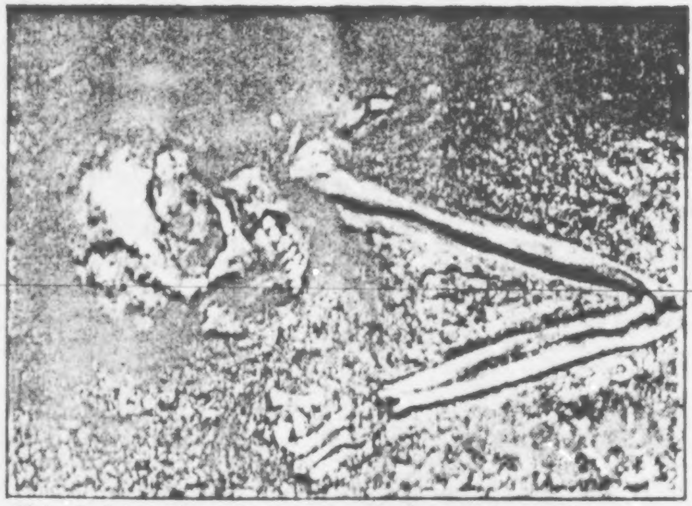
The discovery is significant because few other complete skeletons of ancient Romans survive. The society is sponsoring efforts to preserve the find, which is in danger of decay from exposure.

The find includes bones of an oar-clutching sailor lying beside a capsized boat, a woman with a hand still adorned with gold gemstone rings and a cluster of 12 skeletons huddled together in embraces of death.

Discovery of so many skeletons on what was the beach front of the town is the first indication that large numbers of people were overtaken by volcanic ash and stone as they tried to flee by sea, said Giuseppe Maggi, director of the Herculaneum excavation.

Because few remains were found previously, scholars thought most of the townspeople had escaped.

Herculaneum is believed to have been a wealthy resort community of about 4,000 when Vesuvius erupted Aug. 24 and 25 in the year A.D. 79.



This skeleton of a woman was one of more than 80 found recently in the ruins of the ancient ton of Herculaneum, near Pompeii in Italy. Residents were killed more than 1,900 years ago when Mount Vesuvius erupted. Gem-studded gold rings were found on the skeleton's hand. ***(Associated Press)***

The town, in a suburb of present-day Naples, was a few miles from the base of the volcano and 10 miles from Pompeii. Its seashore, now buried under 80 feet of solidified ash, is 500 yards inland from the present Mediterranean shore.

The cache of skeletons was found in and around a large public bath near the old beach outside the town walls. Two terraces supported by stone arches connected the bath with two nearby religious buildings.

Scientists believe that while many people fled Herculaneum on foot after the first day of eruptions, which buried Pompeii and 2,000 of its citizens, others stayed near the shore awaiting rescue by ship.

The second day of eruptions sent an avalanche of debris pouring onto Herculaneum at 60 mph, overwhelming and obliterating the town.

Herculaneum remained lost until 1709, when a well digger broke through to an underground theater. Although tunnels were dug in search of art and treasure, it wasn't until the last century that archaeologists systematically began removing the blanket of debris.

Recent excavation at the old beach front led to discovery of four skeletons in 1980 and triggered seeping groundwater.

Kansas City Star

17 November 1982

Appendix A No. 4

Lesson I. 9:00 - Monday, February 3, 1969

1. Teacher put a___a e o _ o _ i__ on board and asked children to name a consonant letter. Called on different children until *archaeologist* was spelled. Children tried to figure out word so they would not be hanged.
   After they had figured it out, she asked them to pronounce it.
2. Then said, "We are going to talk about some people called archaeologists."
3. Passed out articles from *Rural Electric Missourian*, *Province* and *Clinton Eye*. Talked about where these papers originated and where the towns were. Found Vancouver on the map.
4. Teacher wrote on the board the three questions they were to talk about after they read the articles.
   (At this time 8 or 9 children had to leave for something previously scheduled. Teacher went out with them and was gone five minutes. Children sat quietly without doing anything, for most had finished their reading.)
5. Teacher asked, "Who are archaeologists? Let's get your ideas down." After ideas began to wane, asked "Who read the *Clinton Eye*? Why would the Missouri University archaeologists want the evidence we have listed?" Etc.
6. Ideas were listed under the questions as they came from children. The lists looked like these:

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Who are archaeologists:

They uncover old things

They find things people used who lived long time ago

Are scientists who dig to find out how people lived long ago

Are people who seek to find Indian sites and mastodons

They dig in likely places such as tar pits, swampy places and where objects have been found

Maps give possible leads

What evidence do they seek?

How people lived long ago

Evidence about plant life

Seek Indian sites and early animals (mastodons)

How different cultures started

What made people do the things they do

How people progressed from one stage to another

Why do they want this evidence?

So they can find out about Indians and other peoples of long ago

So they can find out what animals lived long ago and where our animals came from

They want to see if Indian cultures of long ago have influenced our culture

Valuable historic information

Dating on this might help them get dates on others--give proof about other dates

7. Teacher had children underline the words that were new to them and should go in the book of terms.
8. Showed children two cards. They had these things written on them:

   I study the life of earlier peoples. Who am I?

   Emphasized that:

   "As far as we know now ----."

Appendix A No. 5

Anthropologists

Anthropology is a study of the way human beings adapt to their environment. It is a scientific study of mankind.

Human beings can be separated into different nations, tribes, or other more or less organized groups called societies. The people who belong to each society talk and act and think much alike. Their way of adapting to the environment is unique to them and results in what anthropologists call culture. It is these adaptations that anthropologists spend their life studying.

Culture may be defined as all the customs, or all the different ways of behaving and believing that a society teaches its members. It includes the morals and manners shared by the members of the society; the language the members use; the way food is obtained, prepared and eaten; the religious beliefs, marriage customs, family relationships, and child rearing practices; the laws the people have; the art and music of the society; the way other living things in the environment (such as animals, birds, and plants) are viewed; how the creation of the world is explained; and all of the society's other ways of behaving and believing.

Culture is learned. People are not born with a culture, but they are born into a culture. They learn their culture from the society in which they live.

Because the study of culture includes so many things, individual anthropologists concentrate on either the physical characteristics or the cultural aspects of the people in the societies they study. Those who study the physical characteristics are called physical anthropologists. They study the biological characteristics of the different blood groups, that is people who have common characteristics or a natural relationship to each other. Some of the characteristics of the groups studied are the color of their eyes, the color of their skin, their head shapes, blood types, body proportions, distribution of body hair, and all such inherited, unchangeable physical features.

Physical anthropologists are also concerned with human evolution--that is, how humans have developed over the many, many years they have been on earth. One type of physical anthropologists is called a paleoanthropologist. Paleoanthropologists study the fossils of our human ancestors. Data they have obtained from studying skeletal remains that have been found in excavations of known geological age, or bones found where the age of organic materials have been determined by carbon 14 tests, have not only provided evidence that human beings have descended from earlier forms, but have helped describe what this change, or descent, has been.

Those anthropologists who concentrate on the cultural aspects of the people they study are called cultural anthropologists. They study different societies or social groups who live in all parts of the world--Australia, Africa, Europe, Asia, and the Americas. The ways of life of these groups have been and are different. They have learned different ways of surviving, living together, and communicating with each other.

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Cultural anthropologists try to find reasons for the differences in the way people in the different cultures live. They have learned that people who lived long ago lived differently than those living today, that people who dwell in hot climates live differently from those living in cooler climates, that those who live near the sea have different ways of living than those who live inland, that those who live in deserts live differently from those who live where there is plenty of water, and that people who live in mountains do not live as those who have homes in flat countries or plains. From studying these differences they have found that humans everywhere form their beliefs and behavior in response to common problems faced by all people. All humans require food, clothing, and shelter, and to meet these needs language, kinship systems, use of fire, naming of individuals, belief in a supernatural world, music and other arts, as well as many other cultural patterns are developed. All humans desire a better way of life and more happiness for themselves and their families, and when they cannot get what they require and desire they become unhappy and often do not live in peace with others.

Some cultural anthropologists study the historical character of a society, that is how it has changed over a period of time. Others analyze many cultures to determine how the different parts of each culture (i.e. the religion, laws, family patterns, beliefs, and the like) are woven together.

Archaeology and ethnography are historical studies of culture. Archaeologists gather evidence about the cultures of long ago societies from excavations in the soil. They find out about man's past from the everyday things such as houses, garbage, tools, implements, and anything else left behind. Ethnographers gather data by observing living societies. They live in the society that they are studying and record the human behavior which they see and get explanations for this behavior from the people they observe. After the ethnographer and archaeologist go back to their laboratories, they compare the data they have found with what others have found and make statements which are called generalizations about their findings, and whether their findings agree with what others have found.

Anthropologists believe that knowledge of the great variation in the physical and cultural characteristics of people on the earth, no matter how unusual, is important for understanding our own complex culture. It helps us understand more fully our reactions to life situations as well as appreciate the common qualities of all people where ever they happen to live.

Vocabulary and Terms of People Who Study the Past

Anasazi	- (ah-nah-SAH-zee) the old Ones. People who lived in Cliff Palace in the Southwest desert area.
anthropologists	- scientists who study the evolution of man, his various ways of organizing group life and how he utilizes the natural environment.
anthropology	- a scientific study of the way mankind adapts to the environment.
archaeologists	- people who study prehistory. People who study artifacts of prehistoric people as well as bones of people and animals of prehistoric times.
archaeology	- the study of past human life and activities, as shown by the relics, monuments, and garbage of ancient peoples. The study of prehistory.
archivists	- those who collect and store evidence such as public records (land deeds and other records), written documents (books, newspaper and magazine articles, speeches, advertisements, etc.), personal records (diaries, letters, pictures of prominent people), etc.
artifacts	- objects that have been made by people--tools, cooking utensils, etc.
astronomers	- scientists who study the bodies in the sky such as the planets, stars, etc. They study their size, location, movement, what they are made of, and the like.

carbon-14 dating	- a method of determining the age of organic materials by measuring the rate of breakdown of carbon 14.
culture	- ideas, knowledge, beliefs and systems of behavior of people. In an archaeological sense the implements, utensils, and other remains showing how people lived.
cultural anthropologists	- people who study primitive and more advanced societies, and man's cultural evolution. They investigate the structure of society by studying the kinship patterns, property concepts, authority, work, art, nature of the home and village, clothing and foods, religion and ceremonies, language, legends and myths.
cultural anthropology	- study of man's cultural evolution and of primitive and more advanced societies.
dendrochronology	- dating of prehistoric sites by use of tree-ring sequence.
ethnographer	- a cultural anthropologist who studies living societies.
Folsom people	- early people who hunted across the middle of the United States--almost from coast to coast.
Folsom points	- a chipped stone point about two inches long with a single narrow groove running from haft to point. First found in Folsom, New Mexico.
geologists	- scientists who seek evidence of the past by studying the earth's crust. For example they study the various eruptions which have penetrated the overlying strata, the

	composition, location, thickness and age of the natural and artificial layers of soil in the earth, and the kind, location and age of rocks.
genealogists	- those who study the history of the descents of a person or family from common ancestors or ancestor.
genes	- an entity concerned with the transmission and development of hereditary characteristics.
historicans	- people who study written records of the past to find what has happened to man. They seek evidence from records of literature, law, art, social institutions, archietecture, religion, philosophy. They attempt to make a record of what has happened to man within a chronological framework.
history	- the past that has been written down as it happened, and that can be read.
hominid fossils	- the bones of extinct human ancestors and their close relatives.
mano	- a hard stone used for grinding.
metate	- a flat stone slab on which the mano is rubbed to grind corn or seed.
midden	- a refuse heap marking the site of primitive habitation.
migration	- to move from one country or locality to another for permanent residency.

paleoanthropologist	- one who studies the fossils of human ancestors.
paleontologists	- scientists who seek evidence of the past from studying the location, kinds and age of fossils, the location and kinds of bones of animals, and the types of native and imported plants.
petroglyphs	- stone writings.
pictographs	- picture writings.
physical anthropologists	- scientists who are concerned with human evolution, that is how humans have developed and changed over the years they have been on the earth. They study skeletal remains of human beings.
Pleistocene	- glacial or ice age lasting some half million years.
potsherds	- bits of pottery
prehistory	- a time when nothing was written down.
salvage archaeology	- examining sites for prehistoric artifacts before construction starts.
site	- any location that shows evidence of human occupation.
social psychologists	- those who deal with such problems as the effects of social pressures on the behavior of individuals living in the same cultural groups, and how the behavior of individuals is influenced by these cultural groups.

sociologists	- scientists who try to discover how groups within societies become organized and what causes them to become disorganized. They try to predict conditions which will lead to reorganization. They make scientific studies of the social relations which people develop as they live, work and play with one another.
stratigraphy	- the successive layers of occupancy in any site. The study of layers called strata, lying one above the other in which prehistoric remains are found.

Appendix A No. 7

Archaeologists and How They Work

Everything that we do and have today has its roots in the past. The past that has been written down as it happened is called history and the people who study the written records of the past are called historians. They study books that earlier historians wrote, old newspapers, magazines, letters, diaries, account books, and other documents written at the time they are studying.

There was a time however when nothing had been written down. Writing had not been invented. That time is called the age of prehistory. Historians cannot study it because there are no written records. Prehistory is studied by cultural anthropologists called archaeologists. Archaeology is a study of prehistory. It ends when history begins.

Archaeologists study the artifacts or objects made by people who lived in prehistoric times. They study their tools, cooking utensils, pieces of clothing, weapons, objects used in games, religious articles, works of art and other objects which were lost, thrown away, or buried with the people who lived at that time. Very often physical anthropologists work with archaeologists and study the bones of prehistoric people and animals found with the cultural artifacts.

Archaeologists find these artifacts by digging in the soil of the campsites of the early people. From the objects they find they reconstruct the story of how people who were at a particular place many years ago lived. In other words they study the culture of the people who lived at that time. Culture is the ideas, knowledges, beliefs, and systems of behavior people have learned by being members of a society. It is a way of living. It is what people make and do. It is man's way of adapting to his environment.

There are other cultural anthropologists besides archaeologists. Ethnographers study present day societies by living in those societies and studying the things these people do and why they do them.

Archaeologists have to dig in the ground to find out about early people because the buildings they made and the things they use do not last forever. Sometimes these early people moved away and left the house or village and possessions they did not want. After many years the walls of the buildings would fall down or cave in, dust would accumulate and brush and weeds would cover the house or village. Finally nothing could be seen. Then other people might build on the same site. After many years the houses of the first people who lived there could be buried beneath many feet of soil made from the litter of later people who also lived there but moved on.

Archaeologists dig in a particular site for various reasons. Sometimes a site is found when a new building is being put up or a new road is being built. Sometimes a farmer uncovers a burial when he is plowing a field. This is called salvage archaeology.

Other times archaeologists dig in a particular place because they have spotted a sign that makes them think there is something beneath the ground at that point. It might be a few scattered flint chips. It might be a depression in the ground that looks as if a house had been there. Or it might be a slight mound that does not look like the other country around it. Archaeologists have been trained to know what to look for and where to find it.

Before an archaeologist starts digging, he maps the area in which he is interested. Many times he marks it off in squares. The squares are five, six or more feet on each side. Sometimes he marks the area off in rectangles about six feet wide. Then he starts to strip the earth away layer by layer. He keeps a very careful record of everything he finds. He has a sack for each level and each rectangle or square. Everything from that particular level and square (or rectangle) is put in the correct sack. Before he puts an object in the sack, he measures exactly where it was found and makes notes about it. Sometimes he takes pictures. This is all very carefully done because an artifact only tells a story when its relation to other objects is known. Each object is given a number. The number is put on it and also recorded in a book.

After the digging is over the archaeologist packs up all of the artifacts he has found and takes them back to the university or laboratory where he works. There he sorts and studies the things he has found. He compares what he has found with what other archaeologists have found. He puts pieces of things together and from all of this study he finds out a little bit more about how the people he is studying lived.

Appendix A No. 7

One of the questions an archaeologist tries to find an answer to is: How old is it?

One way he tries to answer this question is by stratigraphy. If one layer of cultural material is on top of another, then the one on the bottom is the oldest. Layers with signs that man has lived there are called occupation levels. Signs that man has lived at a place are artifacts, campfire ashes or human bones. Even a layer without any signs that man lived there tell the archaeologist that no one was living there during the time the soil was accumulating.

This, however, does not give the exact date the people lived. If there are wooden rafters or other pieces of wood that have not rotted, archaeologists can often find the dates people made the houses by dendrochronology or tree ring dating. Each year a tree puts a ring around the outside just next to the bark. These rings not only tell the age of a tree but they also register climatic changes. If it is a dry year, the ring is very narrow. If it is a wet year, the ring is wide. By using a tree ring calendar, one tree's growth print can be matched against another and the date can be found.

Another way to find the dates people lived is by carbon-14 tests. All plants and animals absorb carbon 14 from the air. During life it is constantly disintegrating and being replaced. Death stops this absorption. But the carbon 14 in the lifeless plant or animal continues to disintegrate or break down at the same rate it did when the plant or animal was alive. Scientsts measure this fixed rate of disintegration in what they call the half life. One pound of carbon 14 will be reduced to half a pound of carbon in 5,760 years. Half of the half pound of carbon will be reduced in half in the next 5,760 years and so on until all the carbon 14 is gone. Knowing this scientists can find out how much carbon is left in a piece of material and from that determine how old it is.

Many times all of these methods of dating are used for finding out how old things are from a particular site.

Appendix A No. 8

Archaeological Field Trip to Mayne Island

One of the nicest experiences I had while visiting at the University of British Columbia was an archaeological field trip under the leadership of Dr. Henry M. Rosenthal of the Extension Department.

We left Vancouver at eight o'clock on July 13, 1968. The mountains were barely visible through the clouds hanging over them, but the sun was beginning to shine through the clouds which had been in the east earlier in the morning. The ride on the chartered bus to Tsawwassen (where we were to take the ferry) was pleasant. After a short wait we boarded the bus at nine fifteen.

As soon as the bus was parked and the other cars waiting for the ferry were on board, our bus driver said we could go "up top." "Up top" was the top deck. It had a large glassed in waiting room and restaurant surrounded by a spacious deck for walking and enjoying the scenery. The floor above this had rooms for the crew and a smaller deck.

As the ferry moved away from the landing at Tsawwassen we saw the new harbor being built out in the strait. Large machinery was at work making an island by dredging up silt and other soil poured into the ocean by the Fraser River. This man-made island would become the new harbor. It would be connected to the mainland by a long causeway similar to the one built out to Tsawwassen.

Our destination was Mayne Island--one of several small islands in the Straits of Georgia known as the Gulf Islands. It was a beautiful trip as we sailed among islands covered with luxurious evergreen growth. Sometimes, from a distance, the passage ways between these islands seemed too narrow for the ferry, but as we got closer they miraculously became wide enough, and to spare, for us to sail through. Crowds of white and gray sea gulls followed the ship. The gray ones were the young birds. Their feathers would become whiter as they matured.

Just before arriving at Mayne Island we were told by loud speaker to board our bus so we could ride off the ferry in it when we docked.

Before eating lunch at Springwater Lodge, a historic landmark in the province, we took a trip around the island--that is around the part that had roads. The island was covered with thick stands of conifers--spruce, fir, cedar and yew--and some deciduous trees like the maple and oak. The leaves on some of the maple trees were huge--at least twelve inches across. There were also many arbutus trees. They were especially interesting because they never shed their leaves. Instead they shed their bark. There were various species of wild berries. Blackberries, raspberries, salmon berries, blue berries and thimbleberries were the only ones I knew. Ferns and glossy leaf-covered plants like the Oregon grape grew closer to the ground and various types of moss were at ground level. The luxurious growth attested to the bountiful rainfall of the area.

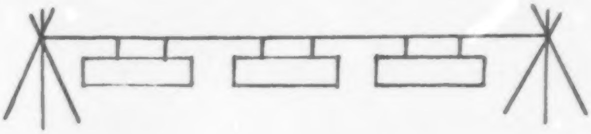
Our lunch was served buffet fashion and consisted of baked salmon, cold cuts, salads, cakes, cookies, fresh bread and orange punch.

We ate on the porch overlooking a grassy yard that sloped down to the cliff which rose from the edge of the ocean. Overhead three eagles were keeping watch--likely over their nests which were high in the cedar trees. The view was so beautiful that for once I paid little attention to the antiques which were everywhere in this old home built about 1871.

After lunch we started for the excavation. The bus took us to within one and a half miles of the actual site which was on a Salish Indian Reserve. To get to it we walked through the timber, sometimes two by two but more often single file. I enjoyed this as much as any part of the trip. For a short time I was traveling the same ground in the same way as the prehistoric Indians whose bones I would soon see.

The site was a midden, that is, an accumulation of thousands of years of garbage. It had been mapped out into two meter wide rectangular plots by Dr. Roy Carlson and twelve of his students from Simon Fraser University in Vancouver, B.C. Each rectangle had been stripped layer by layer by the students and any bone, arrowhead, spear point, fish hook or other artifact found was placed in a paper sack provided for that rectangle, after a careful record had been made of exactly where it had been found. These sacks for the various rectangles were lined up on the edge of one of the rectangles. Before any object was picked up measurements and notes were made on its exact location. This was very important because each object is significant, that is has scientific value, only when its relation to other objects is known.

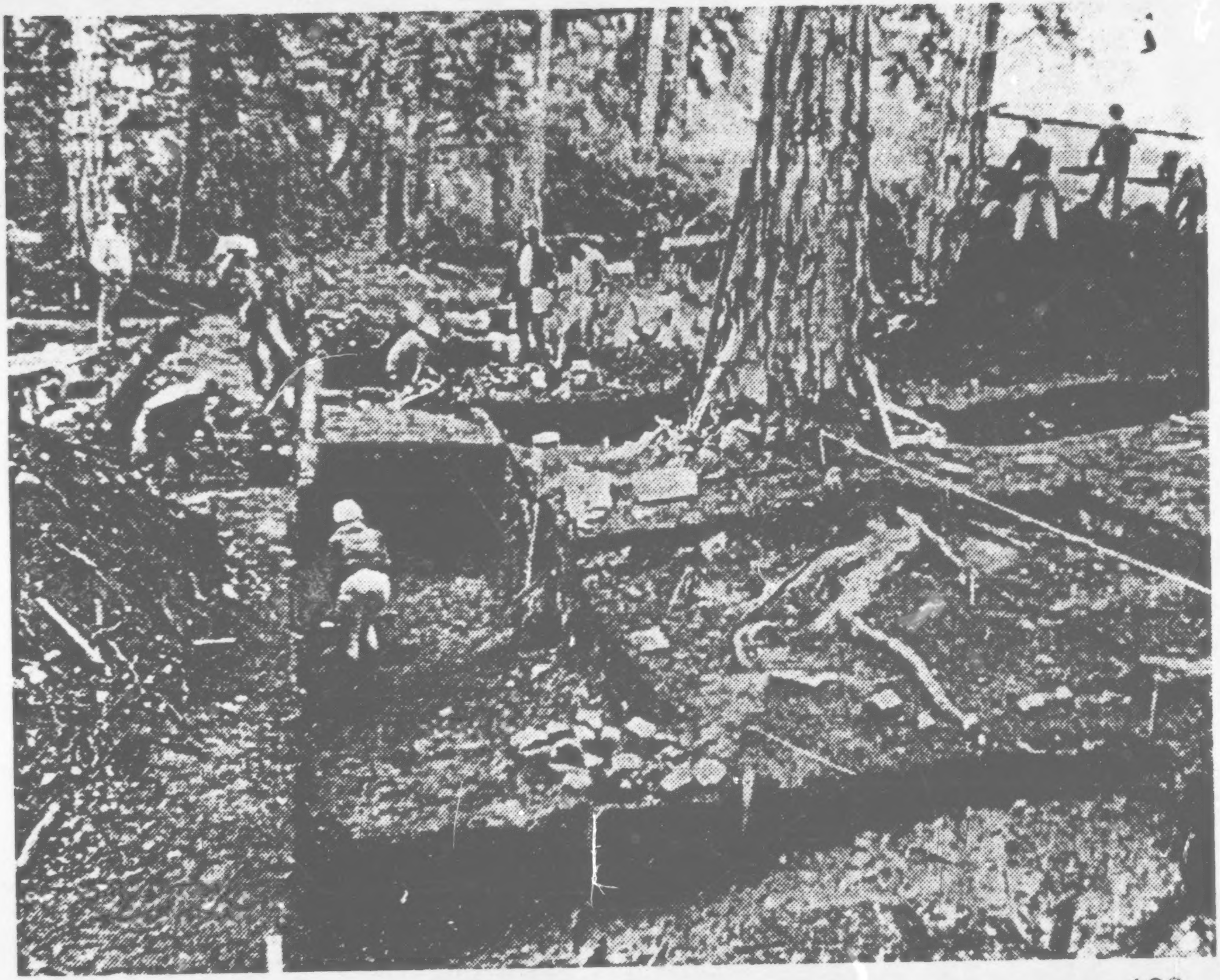
All of the soil taken from the rectangles had to be sifted through coarse screens. These were hung to a pole which was fastened across over poles. Everything left after the dirt was out of the screen was carefully examined. Anything of worth such as small pieces of bone, chippings from tools, etc. was put in the paper sacks.



The artifacts were taken to a tent, down near the beach, where they were handlettered with an identification number and recorded in a record book. A student from Simon Fraser University did this. The findings were also recorded on a big map of the diggings.

The would-be archaeologists were digging down to bedrock in each of the rectangles. Bedrock was the rock left by the ice age. The things the students and Dr. Carlson had found before they got to bedrock indicated people had lived there as long as 5,000 years ago or about 3,000 B.C.

As we looked at the walls of the excavations, we could see different layers of garbage left by the different cultures dating back 5,000 years. At the top had been the moss and ground cover plants like the Oregon grape. The layer of soil in which these plants grew covered a wide layer of shells--many of them scarcely broken and not mashed down too badly. This indicated that the site had not been built upon after this layer was made, otherwise it would have been tramped



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down and the shells broken. Other layers of soil were below the shell layer. Some of these layers were of rather oily black ashes and dirt. Occasionally a strip of soil of a different color, as when a branch of a tree had decayed, could be seen. There was evidence of posts that had been driven into the ground. This was shown by the vertical columns of soil of a brownish color where wood had decayed as contrasted with the black soil around it.

Several burials had been found in the excavation. The skull and bones of one indicated that the body had been buried in a flexed position--arms flexed at the elbows and bended up; knees flexed and drawn up. There were three black arrowheads among the bones. The students hoped to find a spearhead also. They had found a spearhead at the other two burials so they were hoping they would be as lucky at this one. What might they hypothesize if they found one at all three burials?

The students were digging with pocket knives, little trowels and little picks that looked something like an ice pick. They had used shovels for some of the top digging. They also had regular paint brushes--the kind used to paint the outside of houses--and whisk brooms that they used to brush off the bones and other objects they found while they were digging them out. One student found a big clavicle while I was watching. He hypothesized that it had belonged to a large sea mammal. It was brownish in color and soft and crumbly. Since it was too soft to lift out without breaking it all to pieces, Dr. Carlson told him to dig around it, brush it off real well and then coat it with "glue" before they lifted it out. This would keep it together.

At the bottom of one of the rectangles near the north end, a group of stones arranged in a circle-like form had been found. We were told it was a hearth. Near the hearth was a pile of little round stones two to three inches in diameter. They were cooking stones to put in the baskets they used for cooking, i.e. boiling, the food. No pottery had been found in this excavation or any other excavations of the people of the Northwest Coast.

In another rectangle large stones had been left by the excavators. They had a diameter of eight to ten inches and had been left because the students thought they might find something else which when put with these stones would make a pattern that would tell them something they did not know about the people.

We asked Dr. Carlson how he knew where to dig. In other words, how did archaeologists find digging sites. He said they looked for places that were different from the other land around it. The place where they were digging was a kind of mound. It was a little higher than the surrounding terrain and we would see where the other ground had dropped away from it. He said the forest was not as thick on it, there were no large trees, but there was more underbrush and Oregon grape. He showed us another place where he wanted to dig next year. It was a depression that might indicate where a house had been.

Before sites can be opened in British Columbia, the antiquities law requires that a license for archaeological excavation be issued and that if it is on a reservation a representative of that tribe must be part of the crew. Since this site was on a Salish Indian Reserve, Fraser Smith, a young man of Salish descent, was a member of the archeaological crew.

We asked what would happen when they finished their digging. Dr. Carlson said that all the holes (rectangles) they had so carefully measured and dug would be filled up with the dirt they had sifted through the screens.

Before going home we went down to the beach. There we picked up shells of some of the animals like the ones the Indians who lived thousands of years ago at this site might have gathered for their food. At the end of the beach, near a cliff that rose almost straight up, three other men had a "site." They were digging in the side of the cliff and gathering material for the Provincial Museum in Victoria, British Columbia.

After a short stop at the kitchen tent, where we were served Kool Aid, and a quick look at the tents where the students slept and the tent where the records and artifacts gathered from the excavation were kept, we walked back through the woods, boarded our bus, and went back to Vancouver.

Appendix A No. 9

Mesa Verde

by Eric Gwynne-Thomas

"Mesa Verde" means the "Green Tableland," and it is the name given to the remarkable cliff dwellings of the Pueblo Indians in southwest Colorado. The Indians do not live in these cliff dwellings today and they have not in fact lived in them for nearly 700 years, but at one time they did live in them for a period of about 1,300 years--that is, from the time of Christ almost to the discovery of America by Columbus.

In the very early period of occupation the Indians had no pottery but were expert weavers, and they made baskets, bags, sandals and articles of clothing. Archaeologists for this reason called these early Indians the Basketmakers. In addition to weaving, the Indians made a variety of tools, implements and jewelry of stone, bone, wood and shell. From the hides of animals they made bags, robes, and fur blankets. They grew corn and squash in small fields on the mesa top and they stored this produce in roofed holes in the cave floors.

In time the Indians started making pottery and began to build houses which were clustered in small villages, first in the caves and later on the mesa tops. They began to cultivate beans and they domesticated the turkey.

The early houses were most often "pit houses," that is, they were partly underground with low walls and covered by a flat roof made of posts, sticks, bark, grass and mud. Entry was by means of a ladder through a smoke hole in the roof.

In later times the people abandoned the pithouses in favor of high walled houses built in compact villages. To these the Spanish name Pueblo meaning "village" has been given, and from this period the Indians of the area have always been called Pueblo Indians.

The Indians built their houses first of posts and adobe, and then of stone masonry. The small food storage pits were made larger and larger until they began to be used for religious ceremonies and became known as kivas.

In their later buildings the Pueblos built compact villages which were often four stories high with no doorways to the ground floor rooms. Well shaped stone blocks were used to make strong outside walls for the houses.

Then, during their last 100 years at Mesa Verde the Pueblos abandoned their mesa buildings and moved into the cliff dwellings whose ruins we see today. In the cliff caves they made fine stone and adobe houses for protection, and the walls were often colorfully decorated with symbols and designs.

At Mesa Verde today we may see the Pueblo ruins on the mesa top, such as the Sun Temple, as well as the great ruins in the cliff caves. The most interesting of these are the Cliff Palace, Spruce Tree House, Sunset House, Fire Temple, and the House of Many Windows.

No Indians live in the cliff caves today, and they have not been occupied since the Pueblos left them many centuries ago to live once again in the mesa top villages.

Appendix A No. 10

Serpent Mound

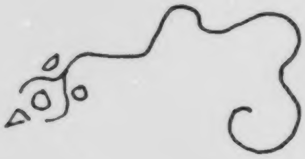
by Eric Gwynne-Thomas

Some Hopis believe that the great Serpent Mound near Louden, Ohio may have been constructed by their ancestors. This serpent mound is the largest serpent effigy in the world. It is an earth embankment nearly one-fourth mile long, twenty feet wide and five feet high. It represents a serpent whose body is extended in seven deep curves. Its jaws are open, the walls forming them being about sixty feet long and seventeen feet wide. Between them is a large oval mound, commonly believed to be an egg which the serpent is swallowing.

According to Hopi interpretation the oval mound represents the village. It was placed within the jaws of the snake to show that it was protected by the snake's power. The extension, sticking out in front of the oval, shows that the snake has the power to draw light.

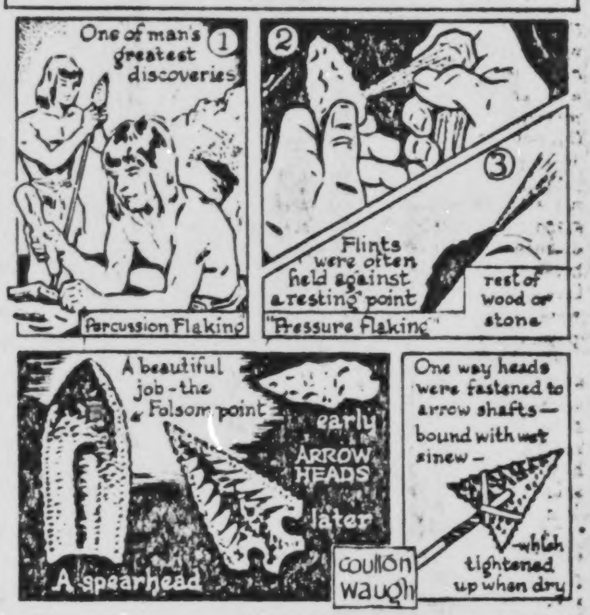
The two small round mounds on each side of the snake's head represent his eyes as well as the circular markings of his body.

He was the guardian snake of the east and would protect the people on their journey to the west.



Appendix A
No. 11

Junior Editors Quiz on
ARROWHEADS


One of man's greatest discoveries
①
Percussion Flaking
②
③
Flints were often held against a resting point
"Pressure Flaking"
rest of wood or stone
A beautiful job - the Folsom point
early
ARROW HEADS
later
A spearhead
Coulton Waugh
One way heads were fastened to arrow shafts — bound with wet sinew —
which tightened up when dry

QUESTION: *How were arrowheads carved out of stone?*

* * * *

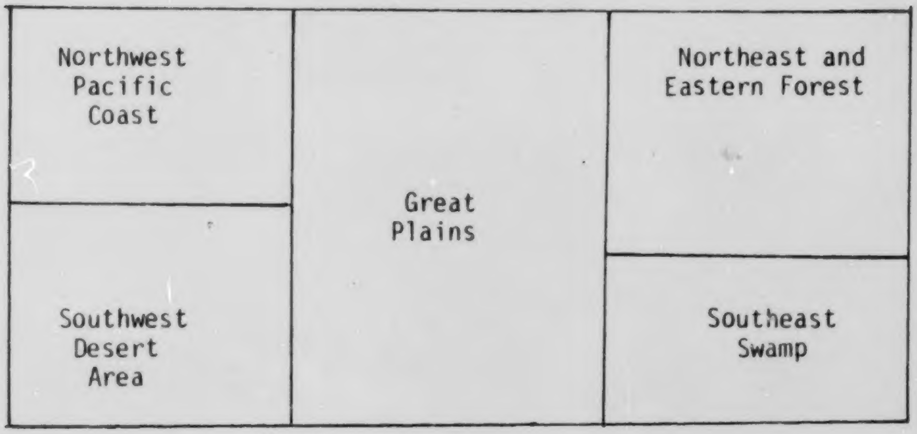
ANSWER: Certain kinds of hard stone, especially flint, have such an even grain that curved, smooth chips or flakes can be easily knocked off them. This was one of the great discoveries made by primitive man. It enabled him to chip cutting edges on bits of rock and make knives, axes and scrapers. It was thus possible for him to kill large animals, utilizing their bone, meat and hide. When, more than 8,000 years ago, the use of bow and arrow began, primitive men began to tip their arrows with stone. At first, such arrowheads were crude, but later were beautifully shaped and finished. Most were made in this way: first, (1), the maker knocked pieces off a flint rock and selected the best shaped ones. Then (2) he held a flint in one hand and pressed down on the edge with some kind of point, perhaps of bone or ivory. A chip of the flint would flake off. Another bit would then be flaked off, followed by others, until a sharp edge was made on both sides of the arrowhead. There were various ways of fastening the stone point to the arrow shaft. We show one used by the American Indians.

(Mark Hibbs of Cairo, Mo., wins a prize for this question. You can win $10 cash plus AP's handsome World Yearbook if your question, mailed on a postcard to Junior Editors in care of The Star, is selected for a prize.)

Kansas City Star

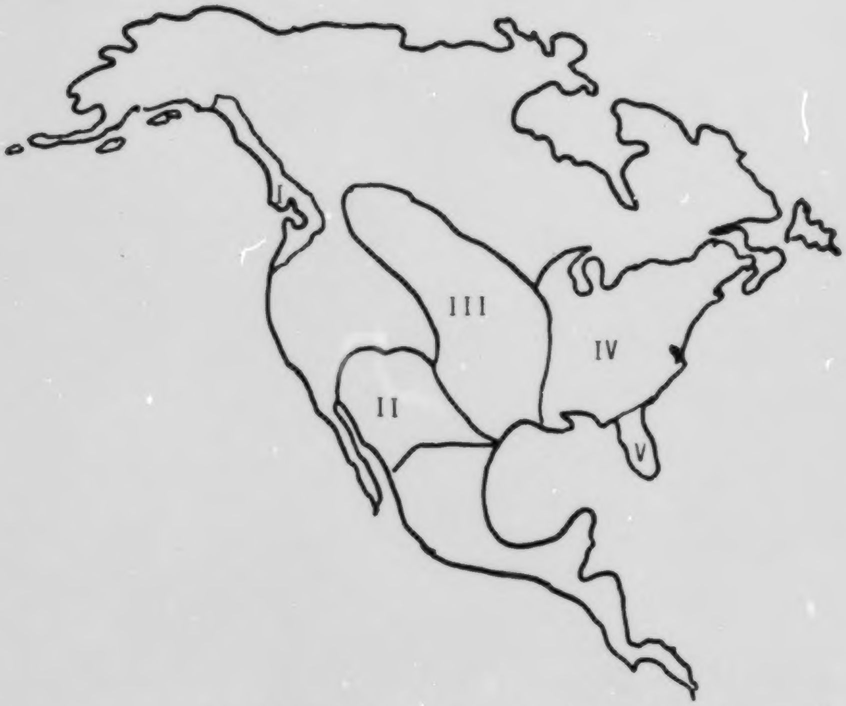
Appendix A No. 12

Major Divisions of North American Indians


Northwest Pacific Coast
Southwest Desert Area
Great Plains
Northeast and Eastern Forest
Southeast Swamp

When the white man came to North America, the country was occupied by many Indian tribes, who spoke many different languages, and who had many different ways of life (or cultures) according to the nature of the land and the climate in which they lived.

Appendix A No. 12



Distribution of Some of the Well Known Indian People and the Nature of the Country in Which They Lived

I Northwest Pacific Coast

Tlingit
Tsimshian
Haida
Bella Coola
Kwakiutl
Nootka
Salish
Quileute
Quinault
Chinook
Klikitat

II Southwest Desert

Navajo
Hopi
Pueblo
Yuma
Apache

III Great Plains

Blackfoot
Sioux
Crow
Cheyenne
Pawnee
Araphaho
Comanche

IV Northeast and Eastern Forest

Iroquois
Susquehanna
Delaware
Powhatan
Shawnee
Cerokee
Chickasaw
Creek
Choctaw

V Southeast Swamp

Seminole

APPENDIX B

Supplemental Material for Developing Section Two of Sequence of Learning Experiences

Appendix B No. 1

Geography of the Southwest U.S.A.

by Eric Gwynne-Thomas

By "S.W." we mean the area now occupied by the states of New Mexico, Arizona and Southern California.

Physically, this is a plateau region (i.e. a fairly level upland) but crossed north to south by several mountain ridges and very dissected by some large rivers and their tributaries.

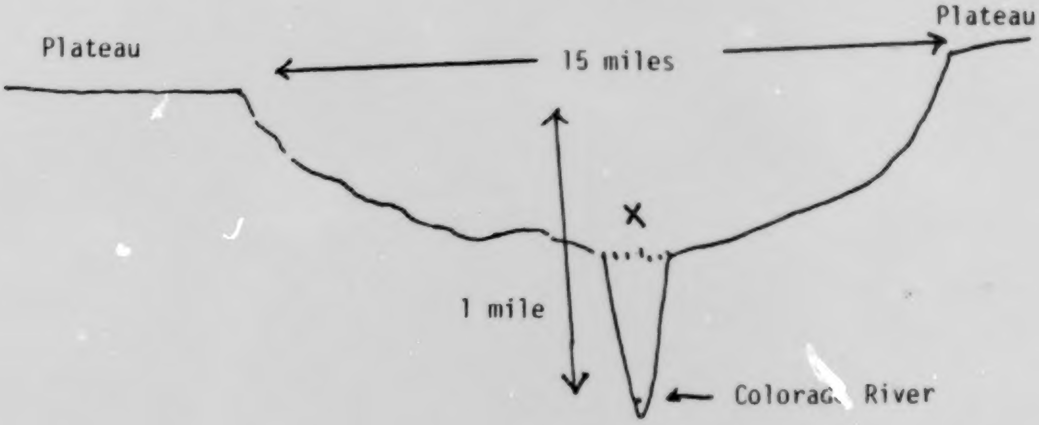
The two largest rivers are:

1. The Colorado, which flows southwards and then southwestwards to reach the Gulf of California, and
2. The Rio Grande, which also flows southwards but then southeastwards until it reaches the Gulf of Mexico.

Since this region does not have much rain during the year, there is very little erosion (wearing away) of the river valley slopes by water. Therefore, over a very long period of time, the rivers have cut downwards into the rocks beneath to form great canyons, the best known of which is the Grand Canyon of Arizona, here the river bed is one mile below the surface of the plateau, while in places the valley itself is fifteen miles wide between the north and south rims of the plateau.

Appendix B No. 1

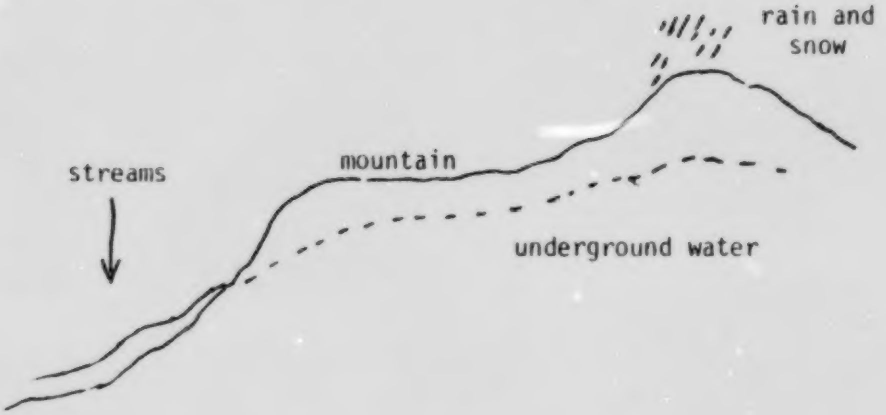
The dissection of the land by deep river canyons results in the formation of large flat topped mountains called plateaus, mesas or buttes.



(The river at one time flowed at X, but because of the rapid uplift of the land, the Colorado cut its way downwards to form a deep steep-sided canyon.)

It is very difficult to get water from rivers which flow in deep valleys, so the desert Indian peoples have had to depend upon the river sources or springs which emerge from the sides of mountains. Where there is gently sloping land, the water from the streams may be diverted into numerous channels for irrigation.

Appendix B No. 1


rain and snow
streams
mountain
underground water

Since there is so little rainfall, the desert Indian has been very clever to devise a method whereby the growing crops may receive an adequate amount of water.

Appendix B No. 2

Physical Features and Resources of the Northwest Pacific Coast

The region inhabited by the Northwest Pacific Coast Indians was a mountainous coast intersected by innumerable sounds and fiords, and dotted with islands, large and small.

North of the Gulf of the Georgia-Puget Sound area the Coast Range was composed of high, rugged, rocky mountains cut by deep canyons made by glacial flow, turbulent streams, and narrow fiords bordered by high cliffs. Southward around Puget Sound and what is now Oregon and Northwestern California there were steep but rounded coastal hills instead of mountains.

The Japanese Current flowed off shore and moderated the climate so that extreme and prolonged cold did not occur. The mean temperature of the area which is now Vancouver, British Columbia ranged from thirty-nine to seventy degrees Fahrenheit. This current also released large amounts of water vapor which was blown on shore by the prevailing winds. As it rose over the coastal mountains and hills it condensed and produced twenty to forty inches of rainfall a year. As a result, many streams and small rivers with their sources in the Coastal Range flowed to the sea, as did the major rivers which had their sources east of the coastal range. The Columbia, Fraser, Skeena, and Nass were examples of these major rivers.

The heavy precipitation along the coast produced dense forests of conifers, or evergreen trees, such as the Douglas fir, various spruces, red cedar, yellow cedar, yew, and to the south, coast redwood. Red cedar was the most used tree. It furnished wood for building and carving, and its bark for making clothing, ropes and many other things. Deciduous trees such as maple, oak, beech, birch, alder and arbutus were also common. They were, however, smaller and more scattered.

A variety of shrub-like plants grew in the forests. Among these were various kinds of berries: thimble berries, salmon berries, raspberries and blackberries.

Ferns, oregon grape and other temperate low growing rain forest plants covered the forest floor. Sea grass and kelp grew abundantly all along the sea.

The Indian women cut the sea grass, formed it into square cakes and dried it for winter use. Berries were picked and some dried. When used they were dissolved in water and eaten mixed with fish oil. This dried food was kept in large boxes made of cedar wood.

The sea and rivers provided a wealth of natural food. Whales were hunted by the Nootka tribe, but sea lions, hair seals, sea otter, porpoise, and other similar animals were hunted more widely. Sea lions and seals were harpooned with a harpoon point either attached to a bladder or tied to the stern of a canoe. The harpoon lines were made of cedar bark or of sinews. The meat of these animals was eaten and their intestines were used to make bowstrings and bags.

Fish were caught in abundance. Five species of Pacific salmon, halibut, cod, herring, smelt, and the olachen or "candlefish" were representative of the variety. (The olachen was so rich in oil that a dried one with a wick threaded through it would burn like a candle.) The codfish and halibut were caught with hooks on fish lines made of kelp. Salmon were caught in weirs and fish traps when they were swimming up the rivers, or by nets dragged between two canoes. Herring and olachen were caught by means of a long rake.

The sea also provided edible mollusks, among which were the clams and mussels. They were collected by the women and were eaten fresh or strung on sticks and strips of cedar bark and dried for winter use. Sea eggs were obtained by means of round bag nets. Fish roe, especially that of herring, was collected in great quantities, dried, and eaten with oil.

In the woods, the deer, the elk, the black and grizzly bear, the wolf, and from the Gulf of Georgia northward the mountain goat, were found. Deer were hunted with bows made of yew wood or maple, and arrows with stone, bone, and copper points. They were also captured by being driven into large nets made of cedar bark, deer sinews, or nettles. Elk were hunted in the same way. Deer and bears were also caught in large traps. Animals which furnished valuable skins such as the beavers, martens, mink, and fur seals, were caught in traps. Dogs kept in the villages helped with the hunting.

Since the Pacific fly-way followed the coast for a great part of its length, during the migration seasons large flights of waterfowls of many species used it. These birds were shot with arrows which had thick blunt points.

Because of the abundance of their natural resources and their willingness to accumulate large amounts for winter use, these Indians had leisure time to devote to art and ceremonialism.

Appendix B No. 3

Salmon

by Eric Gwynne-Thomas

There are many different types of salmon. Those of the Northwest Pacific Coast are related to the trout. They live in the sea and feed on small herring, mackerel, and sand eels. During the year they enter into large rivers (like the Columbia, Fraser, Skeena, and Nass) and spawn during the winter months. The fish which enter the rivers are silvery in color, with red flesh full of fat. Since they do not feed in fresh water, the fish gradually get thinner and thinner and the skin color turns to gray, or brown, sometimes with large black spots edged with white, and often with irregular red spots. The fish therefore have a very different appearance before and after spawning, and it is little wonder that the Indians did not recognize them as being the same type of fish.

When spawning the female fish scoops out a trough in the river gravel and sinking into it deposits some eggs which are fertilized by the male; she then covers the eggs with gravel by strokes of the tail burying them at a depth of about a foot. The eggs are about one-fourth inch in diameter and they hatch at the end of the winter.

For two years the young fish (called parr) live in the rivers and feed on water insects and creatures. They become silvery in color, attain a length of about six inches and begin to migrate to the sea. At this time the salmon are termed smolts.

After reaching the sea they grow rapidly and after one year are termed grilse. At this stage the salmon may or may not return to the rivers to spawn. After spawning the salmon is called a kelt. Some salmon may return to the sea after spawning, but many die in the rivers.

The age of a salmon may be determined by scale reading. Few salmon live more than ten years or grow to a size and weight of more than eighty pounds.

Among the best known types of salmon caught in the Northwest Pacific are the Chinook and Sockeye.

Chinook is also the name of (1) a group of coastal Indians; and (2) a warm, moist Southwest wind which blows from the sea, crosses the Rockies and descends on the Great Plains as a warm dry wind melting the snows in the early spring.

Sockeye is the corrupted form of a Salish word for this type of salmon.

Other kinds of salmon caught by the Northwest Pacific Coast Indians were the Coho, Silver-Pink and Chum.

Fish roe, or fish eggs, is usually considered to be a delicacy. Salmon roe is reddish in color and the individual eggs are comparatively large. Samples of salmon may be seen in supermarkets.

Monday, April 14, 1969 THE KANSAS CITY TIMES 19A

Shelled Animals: Insight to Ice Age

By Walter Sullivan
(New York Times News Service)

College, Alaska—The first examination of deep sediments from the floor of the Arctic ocean indicates that—for perhaps as long as several million years there never has been an extended period when that ocean was free of ice.

If confirmed, this would wipe out some of the most widely held theories to explain the successive ice ages of the last million years. It also would lay to rest the hopes of oilmen—and fears of some climatologists—that the Arctic ocean is about to shed its ice.

Take Many Samples

Several hundred "cores" or cross-sections of the ocean floor have been obtained by driving a pipe-like device into the sediments and hauling samples to the surface. This has been done from the drifting ice island "T-3," which for many years has served as a wandering campsite and observation platform in the Arctic ocean.

The study of these cores, several of which were more than 16 feet long, was described by Dr. David L. Clark of the University of Wisconsin at a 2-day symposium on Arctic research at the University of Alaska here.

His report created somewhat of a sensation at the meeting, although others cited evidence along similar lines.

The ice age theories that have been brought into question are those that see the thin crust of ice over the Arctic ocean as an unstable element. Each summer a large part of the ice around the fringes of the Arctic ocean meets, but normally the floes in the central, North Pole area remain intact, although thinned by the summer sun.

Factor Is Unknown

Once in a long while, according to these theories, something causes all the ice to melt, though the theories differ as to the nature of that cause. This, it is argued, would radically alter the northern climate.

Whereas today the gleaming white surface of the ice reflects most solar energy back into the sky, the dark water of an open ocean would absorb it. The ocean would then become warm enough so that the solid pack could not form again for many years.

Such a situation, many agree, would initiate an ice age. Winds blowing down over North America and Eurasia from the Arctic ocean would be moist, whereas today they are very dry. Consequently, snowfall in the North would increase to such an extent that the winter snow would not melt away in summer and ice sheets would accumulate.

Some See Ice Loss

In recent months it has been argued by some polar specialists, notably Col. Bernt Balchen, the flier, that the ice cover of the Arctic ocean is shrinking toward the vanishing point. This would be a boon to those seeking to bring giant tankers into that ocean to haul out the newly discovered oil from the north coast of Alaska. However it could also start a new ice age.

Several scientists had proposed ways in which the open-sea explanation for the ice ages could be tested by examining microscopic shells from layers in the floor of the Arctic ocean. They included Dr. David B. Ericson, Dr. Maurice Ewing and Dr. Gosta Wollin of Columbia university's Lamont-Doherty geologic observatory and Dr. Orville Bandy of the University of California at Los Angeles.

The shells in question were those of a tiny creature, Globigerina pachydorma, that lives a drifting life in the seas. A peculiarity of this species is that the shells of those living in very cold water spiral to the left, whereas those in slightly warmer water spiral to the right.

If in the ice ages the Arctic ocean became open and warmer, there should be an increase in right-spiraling shells from sediment laid down in that period. No such effect was seen, although one of the cores, more than 18 feet long, was thought to include sediment extending back some 4 million years.

The only observed trend was toward slightly less left-spiraling toward the tops of the cores, suggesting some warming since the last ice age.

The other proposed test of the open-sea hypothesis was based on the assumption that sediment laid down in an open ocean, at the height of an ice age, would differ markedly from that deposited under current ice conditions.

Such a period should show up in all cores as a layer rich in sand, shells and other coarse materials. While such layers were seen in many cores, they occurred randomly both as to time and location and apparently were not the result of an ocean-wide condition.

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Appendix B No. 5

Whaling

Whales were the largest game animals on the Northwest Pacific Coast but their hunting was pursued only by the Nootka Indians who lived on the southwest coast of Vancouver Island and what is now the extreme tip of the State of Washington. Other tribes were satisfied with utilizing the oil rich blubber and meat of the dead carcasses of whales which drifted ashore.

The Nootkan in charge of a whale hunt, and the first person to strike the whale on the hunt, with a large piece of equipment called a harpoon, was given the name of"harpooner". He was always a man of high rank because (1) the practical and ritual procedures of hunting were jealously guarded secrets and were passed from one generation to another in noble lines only, and (2) only a Nootka chief had enough wealth to have whaling canoes built and outfitted, and the authority to assemble a crew and direct their performance. But even in these families the prestige value of whaling was much greater than the economic importance.

Ritual behavior before and during the hunt was considered essential. After ritually cleansing himself, the Nootka chief performed these whaling ceremonies as part of his duty toward his people. The ritual ceremonies he used were similar to those used by another type of Nootka whaler - one who did not go to sea after the whale but who through magic rituals tried to cause whales that died from natural causes to drift ashore. Both of these whale-ritualists conducted ceremonies in secluded spots and made use of human skeletons or corpses who were supposed to call to the whale , or who were propped up with a line attached to a likeness of a whale. The idea was that through the rituals,songs, and prayers used the spirits of the dead would be persuaded to bring the whale ashore.

Preparation for the hunt involved performing the rituals of ceremonial purification to assure success in the hunting, practicing in long drill sessions the tasks each crew member was to perform, and assuring that the canoe and equipment were ready to use. When this was done the chief announced the fact to his crew of eight men. After stowing the hunting gear in a meticulous pattern, so it could be quickly and efficiently secured and so the lines and floats would run out without tangling, the whaling canoe was carried down to the water. Usually a second whaling canoe manned by a younger kinsman of the chief whaler, and a swift sealing canoe to carry the news to the village when the whale was struck were part of the hunting party.

The hunters set out for the whaling grounds before sunset. On the beach their families observed certain rituals to assure that they had good luck and welfare.

At dawn the hunters spread out so as to cover a wider area. When a whale was sighted one of the crew signalled to the crews of the other canoes by waving a paddle over his head. Then all the hunters would paddle to the location and start trailing their quarry.

When the whale was finally overtaken the chief's canoe approached it from the rear as silently as possible and came in on the whale's left side as close as possible. The chief stood with the harpoon held crosswise in front of him, at shoulder height, and since the harpoon was too heavy to be thrown, thrust it into the whale just behind its left flipper.

The first struggles of a wounded whale were very dangerous so the harpooner ducked down into the front part of the canoe until the danger of being struck by the floats or caught in the coil of line was past. The second whaling canoe was given the privilege of planting the second harpoon.

Effort was made to recover the first harpoon so it could be taken ashore by those in the sealing canoe when they left to notify the people in the village that a whale had been struck.

The chief and his supporting canoe, or canoes, followed the whale, running in whenever possible to drive more harpoons with short lines and floats into the whale until it was so weakened that it lay quiet in the water and the hunters gathered around for the kill. There a lance with a long, sharp, bone point was driven behind the flipper to the whale's heart to kill it.

Holes were hacked around its lower jaw to tie its mouth shut so the carcass would not fill with water and sink. Then the task of towing the whale to the village started. The Nootka's believed that if the chief and his crew carried out their rituals correctly the whale, when struck, would turn toward the shore so it could be killed close to the beach. This did not always happen ,however, and sometimes it took a day or more to get it to the shore near their village.

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Drucker, Philip. Indians of the Northwest Coast. Garden City, New York: The Natural History Press, 1963.

Drucker, Philip. "Nootka Whaling." In Indians of the North Pacific Coast, pp. 22-27. Edited by Tom McFeat. Toronto: McClelland and Stewart Limited, 1966.

Appendix B No. 6

Vocabulary and Terms of Terrain, Climate, Vegetation and Animal Life

arid	- without moisture; dry; barren.
arroyo	- a watercourse; a small often dry gully or channel.
boiling point	- 212 degrees Fahrenheit or 100 degrees centigrade.
butte	- an isolated hill or small mountain with steep sides.
canyon	- a deep valley with high steep sides.
centigrade thermometer	- a thermometer on which the interval between the freezing point and boiling point of water is divided into 100 parts or degrees so that 0°C corresponds to 32°F and 100°C to 212°F.
channel	- the bed where a natural stream of water flows.
climate	- average condition of the weather of a place over a period of years as shown by temperature, wind velocity, rain, etc.
conifers	- evergreen trees such as firs, spruces, cedars, yews, redwoods.
deciduous trees	- trees which have leaves that fall at a certain season of the year.
desert	- an arid region lacking moisture to support vegetation.

erosion	- land wearing away by the action of water or wind.
fauna	- the animals of a given region.
fertilizer	- chemicals or animal manure put on land to make it fertile and more productive.
freezing point	- the temperature at which a liquid solidifies. For water the freezing point is 32° Fahrenheit or 0° Centigrade.
fiords	- narrow inlets of the sea, between banks or rocks.
irrigation	- process of supplying land with water by causing a stream to flow upon, over, or through it, as in man-made channels.
kelp	- large brown seaweeds.
mesa	- a flat-topped rocky hill with steeply sloping sides.
olachen (or eulachon)	- a fish which provided the Northwest Pacific Coast Indians with oil for cooking and for use in trading for other needed products.
mollusks	- animals popularly called shellfish, having a soft unsegmented body protected in most cases by a shell. Mussels, clams, oysters, cuttlefish, etc. are mollusks.
plateau	- a broad, high tract of land.
precipitation	- the amount of water deposited on the earth by hail, mist, rain, sleet or snow.

sequoias	- either of two species of Northwest Pacific Coast trees, belonging to the pine family, which reach a height of over three hundred feet.
sound	- a long passage of water connecting two larger bodies of water, or forming a channel between the mainland and an island.
strait	- a comparatively narrow passageway connecting two large bodies of water less wide and extensive than a sound.
terrain	- a tract or region of ground being observed or studied.
weirs	- a fence, as of stakes or brushwood, set in a stream or river for catching fish.

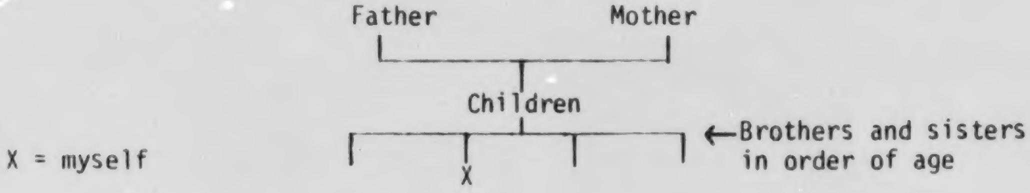
APPENDIX C

Supplemental Material for Developing Section Three of Sequence of Learning Experiences

Appendix C No. 1

DIAGRAMS OF FAMILY TREES

Diagram of Nucleated Family Tree


Father
Mother
Children
X = myself
X
←Brothers and sisters in order of age

My Family Tree

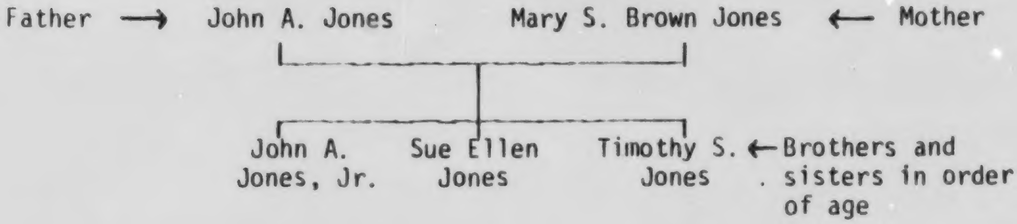
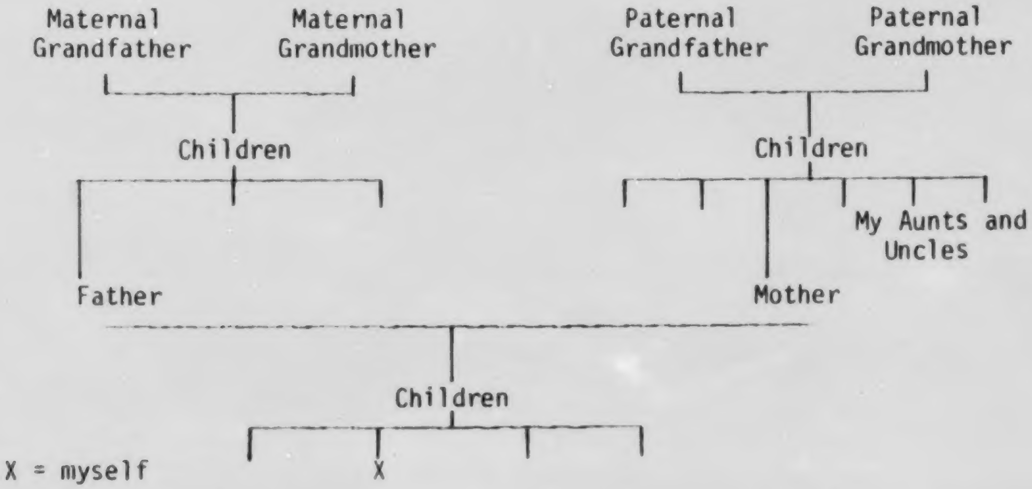
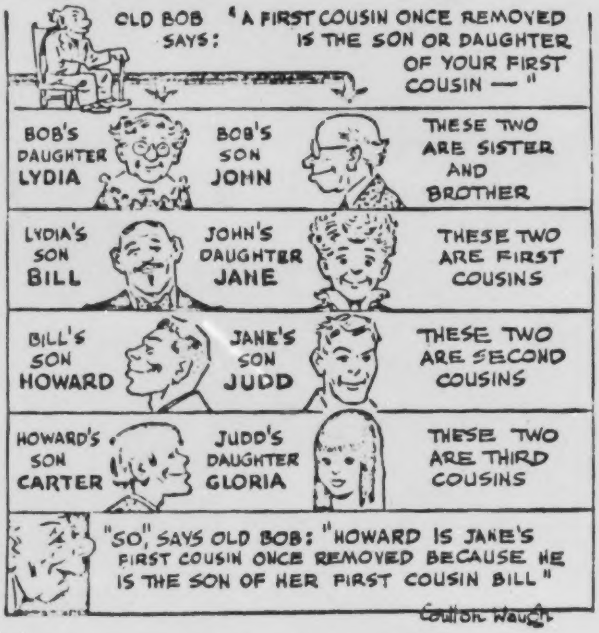

Father →
John A. Jones
Mary S. Brown Jones
← Mother
John A. Jones, Jr.
Sue Ellen Jones
Timothy S. Jones
←Brothers and sisters in order of age

Diagram of Extended Family Tree


Maternal Grandfather
Maternal Grandmother
Paternal Grandfather
Paternal Grandmother
Children
Children
My Aunts and Uncles
Father
Mother
Children
X = myself
X

Appendix C No. 2

Junior Editors Quiz on
RELATIVES


OLD BOB SAYS: "A FIRST COUSIN ONCE REMOVED IS THE SON OR DAUGHTER OF YOUR FIRST COUSIN — "
BOB'S DAUGHTER LYDIA
BOB'S SON JOHN
THESE TWO ARE SISTER AND BROTHER
LYDIA'S SON BILL
JOHN'S DAUGHTER JANE
THESE TWO ARE FIRST COUSINS
BILL'S SON HOWARD
JANE'S SON JUDD
THESE TWO ARE SECOND COUSINS
HOWARD'S SON CARTER
JUDD'S DAUGHTER GLORIA
THESE TWO ARE THIRD COUSINS
"SO," SAYS OLD BOB: "HOWARD IS JANE'S FIRST COUSIN ONCE REMOVED BECAUSE HE IS THE SON OF HER FIRST COUSIN BILL"
Coulton Waugh

QUESTION: *What's the difference between a first cousin and one once removed?*

* * * *

ANSWER: Cousins are not members of your immediate family; they are related to you because they have descended from the same person. All the people in our picture have descended from Old Bob. Each row under him represents one generation. Lydia and John, Old Bob's children are brother and sister. Below this, their descendants are cousins. First come first cousins, then second, then third. Following Old Bob's definition of first cousin once removed, we go to the first cousin line and find Bill. His first cousin is Jane, and her son is Judd; so Judd is Bill's first cousin once removed, that is, moved down by one generation. In the same way, Howard is Jane's first cousin once removed.

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Appendix C No. 3

Vocabulary and Terms of Family Structure
Social Organization

aunt	- sister of one's father or mother. Also an uncle's wife.
bigamy	- marrying one person when already legally married to another.
bilateral	- having or relating to two sides as maternal and paternal in bilateral descent.
biologic family	- a man, his wife and their children.
blood relatives	- descendants of the same person; father, mother, son, daughter, brother, sister.
chief	- highest ranking member of a lineage.
clan	- an exogamous division of a tribe descended from a common legendary ancestor and constituting the chief unit of a tribal society.
clan mother	- a senior female of a clan in a matrilineal society who kept the clan fetish and ceremonial paraphernalia.
"Copper"	- a sheet of copper in the form of a shield which represented a great unit of wealth to the Northwest Pacific Coast Indians.
cousin	- a son or daughter of one's aunt or uncle. Called more fully *own*, *first* or *full* cousins. Also a *relative descended* the same number of steps by a different line from a common ancestor.

cultural divisions	- Indian groups living within certain regions who, because their lives and customs were influenced by the land about them, had many customs in common. One statement of cultural divisions lists five in North America: Woodland Indians, Plains Indians, Indians of the Southeast, Indians of the Southwest, and Indians of the Northwest Pacific Coast.
daughter	- a female child considered with reference to her parents.
divorce	- a legal dissolution of a marriage.
divorcee	- a person divorced.
endogamy	- a term used when members of a clan must marry a person of the same clan.
exogamy	- a technical term which means individuals of a clan must marry a person of a different clan.
extended family	- relatives beyond the immediate family of parents and children; a less formalized and defined group, than a lineage, which traced descent through either the maternal or paternal line or both.
father-in-law	- father of one's husband or wife.
first cousin	- a son or daughter of one's aunt or uncle. Sometimes called own or full cousin.
first cousin once removed	- the son or daughter of one's first cousin
foster daughter	- a girl who has been cared for by a foster parent.

foster brother	- the relation of a boy to other children of a family who has reared him.
foster father	- a man who performs the duties of a father to the child of another.
foster mother	- a woman who performs the duties of a mother to the child of another.
foster sister	- the relation of a girl to other children in a family, other than her own blood family, who has reared her.
foster son	- a boy who has been cared for by a foster parent.
godfather	- a man who becomes sponsor for a child at baptism or confirmation.
godmother	- a woman sponsor for a child in baptism.
half brother	- a boy or man related to a brother or sister through one parent only.
half sister	- a girl or woman related to a brother or sister through one parent only.
immediate family	- parents and children.
intermarriage	- the process of becoming connected to families, clans, tribes, etc. by marriage.
legal relatives	- relatives by marriage, adoption or other legal action.
lineage	- a formalized named group of relatives who traced descent to a common ancestor through one line, such as the maternal line.

linguistic stock	- Indians grouped according to similarities of the spoken language.
marriage	- act of marrying. The joining of a man and woman as husband and wife.
marriageable	- fit or capable of marriage.
maternal grandfather	- the father of one's mother.
maternal grandmother	- the mother of one's mother.
matrilineal	- social groups in which membership in the social divisions and also the inheritance of social position and worldly goods, came to each individual from the mother and her side of the family.
matrilocal	- located at or centered around the residence of the wife's family or people.
moieties	- two-fold divisions of a tribal group to one of which every individual was assigned at birth. In matrilineal societies the children were assigned to the moiety to which their mother belonged. Each individual had to marry a person of the opposite moiety; clans.
mother-in-law	- mother of one's husband or wife.
nucleated family	- usually parents and unmarried children who live together in a separate family household.
parents	- the father and mother of a child.
paternal grandfather	- the father of one's father.

paternal grandmother	- the mother of one's father.
patrilineal	- social groups in which membership in the social divisions and inheritance of social position and worldly goods came to an individual through one's father.
patrilocal	- located at or centered around the residence of the husband's family or tribe.
potlatch	- among the Northwest Pacific Coast Indians, a ceremonial distribution by a chief of gifts to his own and neighboring tribesman accompanied by festivities. Many events could be the reason for giving a potlatch: the introduction of a small child to the village, the coming of age of a daughter or nephew, a death, a marriage, or simply the assumption of a new name or title which had not been previously claimed.
relatives	- persons related because they have descended from the same person or because of legal action.
remembrancer	- a member of the ancestral family chosen to preserve the ancestral myth.
second cousins	- the children of first cousins are second cousins.
slave	- person held in bondage. Primarily war captives in Northwest Pacific Coast culture.
son	- a male child considered with reference to his parents.
step brother	- a son of one's step parent by a former marriage.

step father	- the husband of one's mother by a subsequent marriage.
step mother	- the wife of one's father by a subsequent marriage.
step sister	- a daughter of one's step parent by a former marriage.
third cousins	- the children of second cousins are third cousins.
totemic groups	- all the people who dedicated themselves to the honor of the same totem.
tribe	- a series of families, clans, or generations, together with slaves and adopted strangers formally united into a large social group.
uncle	- the brother of one's father of mother. Also the husband of one's aunt.
unilateral divisions	- social divisions based on relationships through one side of the family only.
widow	- a woman who has lost her husband by death and has not remarried again.
widower	- a man who has lost his wife by death and has not remarried again.

Appendix C No. 4

Pronunciation Guide for Indian Words

Bella Coola - Bel-la-KOO-la

Coast Salish - SAY-lish

Haida - HY-da

Hopi - HO-pee

Klikitat - KLIK-e-tat

Kwakiutl - KWAK-ee-ootl

Mandan - MAN-dan

Nootka - NOOT-ka

Nez Perce - NAY-pair-SAY

Papago - PA-pa-go

Pueblo - PWEB-lo

Tlingit - TLING-get

Tsimshian - SIM-she-an

Yuma - YOO-ma

Zuni - ZOO-nee

Appendix C No. 5

Kinship and Social Structure of the Northwest Pacific Coast Indians

Although all of the Northwest Pacific Coast Indians had a similar culture, there was some diversity in their kinship structure and hence their social organization.

Each Indian group in the Northwest Pacific Coast culture was divided into social units. Some of these social units were based on matrilineal descent, some had no formalized unilateral divisions but stressed patrilineality, and others followed a bilateral descent which occasionally put a slight preference on patrilineality. In the various Indian groups these social units differed in their relation to other social units. Some were politically autonomous. Some were united into tribes, and in a few instances the tribes were united into larger groupings for social and political purposes.

The basic social unit of the Northwest Pacific Coast Indians was the biologic family which consisted of a man, his wife, and their children. Beyond this basic unit was the autonomous local group which consisted of a lineage or an extended family. A lineage was a formalized named group of relatives who traced descent to a common ancestor through one line, such as the maternal line. An extended family was a less formalized and defined group who traced descent through either the maternal or paternal line or both.[1]

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[1] Philip Drucker, Indians of the Northwest Coast (Garden City, New York: Natural History Press, 1963), p. 108.

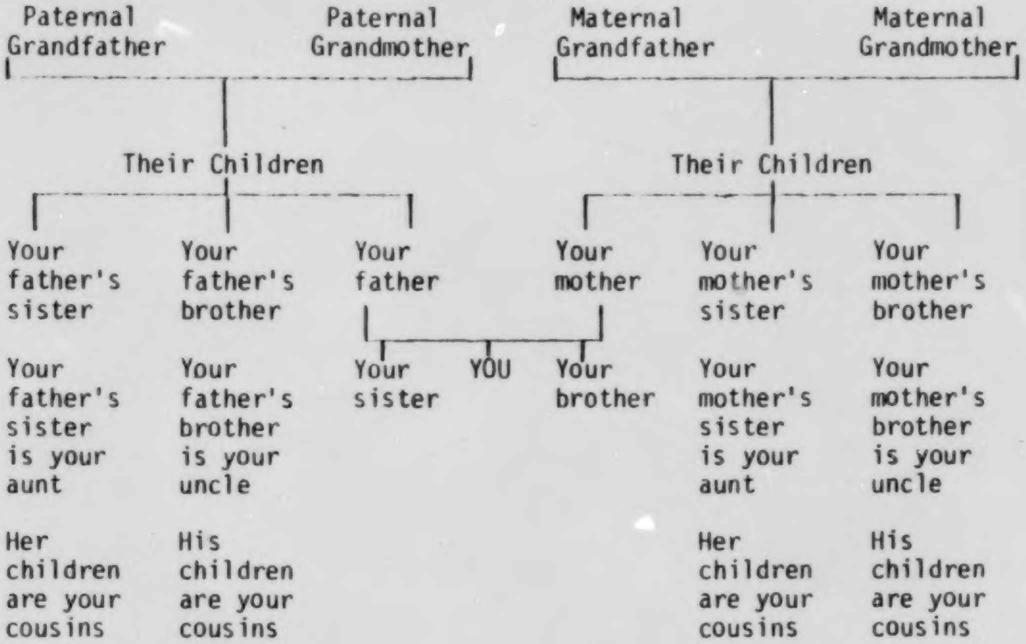
Lineage members were descendants of one ancestor and claimed the crest or totem representing that ancestor. Each village of the matrilineal type of social organization (which was the common type of organization among the three northern most groups) had two major divisions or lineage groups called moieties, halves, or clans. These divisions, moieties, or clans were exogamic, that is members of one division were forbidden to marry a member of the same division. Each clan had a name such as "Eagle" or "Raven." A woman of an Eagle clan had to marry a man in the Raven clan and their children automatically belonged to the Eagle clan. The father's sisters' children, according to the same principle, belonged to his lineage and were "Ravens."

Each clan had important economic possessions such as fishing stations, hunting areas, burying grounds, its own house or houses, its own chiefs and social ranking, and operated socially and ceremonially as an independent unit. It also had its own crest or totem.

The differences between the clans were most rigid. They could not have the same personal, house, or canoe names. The husband and wife were never buried together. "Ravens" were buried with "Ravens" and "Eagles" with "Eagles." A man spoke of the members of his own clan as "friends," "uncles," or "brothers;" of those in the opposite lineage or clan as "opposites," "cousins," "uncles' children," or "brothers-in-law," and "sisters-in-law." The terms of relationship were directly dependent on the division into clans.

Appendix C No. 5

In our families terms of relationships are determined by three considerations: sex, relative age, and nearness in blood. We have separate terms for father, mother, sister, brother, son, daughter, nephew, and niece. We believe that our closest blood relations should receive those terms because their relations to us are the most important. To illustrate our system assume this is your family tree:


Paternal Grandfather
Paternal Grandmother
Maternal Grandfather
Maternal Grandmother
Their Children
Their Children
Your father's sister
Your father's brother
Your father
Your mother
Your mother's sister
Your mother's brother
Your sister
YOU
Your brother
Your father's sister is your aunt
Your father's brother is your uncle
Your mother's sister is your aunt
Your mother's brother is your uncle
Her children are your cousins
His children are your cousins
Her children are your cousins
His children are your cousins

In the clan system each relationship was governed by strict clan laws and was of the greatest importance in every individual's life, so each of the terms used was extended to cover all who bore the same clan relationship to an individual.

If you had been a Northwest Pacific Coast Indian and your mother belonged to the Eagle clan and your father to the Raven clan, you would be an "Eagle" in the matrilineal society. Therefore, your fathers would be all the men of the Raven clan of your father's generation; your mothers would be all the women of your mother's clan (the "Eagles") and generation; your aunts all the women of your father's clan ("Ravens") and generation; and your uncles all the men of your mother's clan and generation. Your brothers would be all the men of your own clan ("Eagles") and generation, and your sisters would be all the women of your own clan and generation. Your male cousins would be all the men of your father's clan ("Ravens") and your generation, and your female cousins all the women of your father's clan and your generation.[2]

The most important feature of the Northwest Pacific Coast Indian life was its system of social ranking. Social status, that is the system of rank in a society came not from heredity alone, nor from wealth, but from a combination of the two. Ranked statuses were the chiefs, the nobles, the commoners, and the slaves, but it was difficult to tell where the nobles ended and the commoners began. The village chief was the highest ranking member from the lineage ancestor, his younger brothers were next in rank, and all the others ranked in terms of kinship to the direct chief line. The most distant relatives were the lowest commoners.

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[2] John R. Swanton, "Social Organization of the Haida," in Indians of the North Pacific Coast, ed. Tom McFeat (Toronto: McClelland and Stewart Limited, 1966), pp. 50-52.

Each village had a village chief, and one or more house chiefs. The village chief was also house chief of his own house. Each house chief lived in a large house shared by four or five families. These families made up the household and since they shared the house chief's honor and prestige, they cooperated with him so he could gain more rank and status by potlatching.

Lowest in rank were the slaves. They had been taken in war or trade and so did the menial chores of the household such as carrying wood and water.

The Indian people of the Northwest Pacific Coast valued social rank and status above all else.

Appendix C No. 6

Kinship and Social Structure of the Southwest Hopi Indians

As in countries all over the world, the biologic family, consisting of a man, his wife and their children, was the basic social unit of the Southwest Desert Hopi Indians. Aside from this the self governing group consisted of a lineage or clan based on matrilineal descent. Membership in the social divisions, and also the inheritance of social position and of worldly goods came to each person from his mother and her side of the family. Each clan bore the name of some species of animal or plant (such as Snakes, Rabbits, Corns, Bears) or of some other class of natural or supernatural beings (such as Clouds, Suns, Kachinas) to whom they considered themselves related. Most of these clans were represented in each pueblo or village. The land and property were owned by the women and were passed on from mother to daughter. The mother of each family in the clan owned several fields, and when her daughters married she might give one or more fields to each of them. On her death, the mother's property was divided among the female relatives of the family. Since the clans were also matrilocal (centered around the residence of the wife's family or people) the wife's was never transferred or owned by anyone outside the family. Upon marriage, the male members of the clan moved out to live with the families of their wives. They joined their wife's household but did not join her clan nor change their name. All the children of a marriage, both boys and girls, were members of their mother's clan. The senior member of the clan was the clan mother. She kept the clan fetish and ceremonial paraphernalia. She intervened in any dispute over land or houses and settled the matter after discussion with those involved in the dispute.

The Hopi clans were exogamous. The members of each clan had to marry persons of another clan.

Each pueblo (village) consisted of various clans, but the leadership of each pueblo was usually retained by one clan, and generally within one family of that clan, in descent in the female line.

The function of the leading chief and family was regarded as preserving the rites and rituals of the clan and pueblo. For that reason members of the leading family were not expected to work in their own fields. The work consequently was performed by individuals of another clan in recognition of the value of the religious activities performed by the leading family.

All members of a clan helped one another. They thought of the clan members as we think of our own smaller family of closest relatives. The older women were mothers to all of the children, the old and the sick were taken care of and every member of the clan had a duty to do his share of work and not become a burden to others if he could help it. Each member also had the duty to not shame the clan by doing wrong.

Though the clan was an enlarged family there were far too many members for all to live in the same household. Usually they lived in a cluster of households in the village. When such households could hold no more, a branch of the family would split off and live in another part of the pueblo.

The Hopi's name for themselves was the "Peaceful People." They frowned upon self assertion, envy, jealousy, personal ambition, and loud argument in their private dealings and in conducting village affairs. Offending one's neighbors, seeking personal prestige and benefits, and boasting and pushing oneself forward were considered the worst faults. They did not like to give or take orders and they avoided both praise and blame. They were quiet mannered and lacking in self importance, but were willing to carry out extra responsibility placed upon them by the clan society or village--even when it was the responsibility of leadership.

The Hopi view of what was good and proper in dealing with one another and with the world in general was being cooperative and responsible. They knew their own duties and responsibilities and the right rules of behavior. They believed they should be so intent on taking care of them that there would be no time to think of personal prestige or benefits.

Appendix C No. 7

Vocabulary and Terms Related to Homes, Villages, Work, Games and Sports, Food, Dress of Men, Women and Children, Religious Beliefs and Practices, Societies, Dances, Ceremonies, Road of Life and Cycle of Life

adobe	- a kind of clay dried in the sun, often in the form of bricks.
amulet	- some small object worn as a charm against evil and often inscribed with a magic symbol.
Corn Mother	- a perfect ear of corn where the tip ended in four full kernels, which was used in Hopi ceremonials.
creation myths	- narratives which attempt to explain the beginnings of the universe, the world, and the earth.
fable	- a highly condensed lesson in morality. A brief narrative which takes an abstract idea of good or bad, wise or foolish behavior and attempts to make them concrete and striking enough to be understood and remembered. The characters in the narratives, whether men or beasts, remain coldly impersonal and engage in a single significant act which teaches a moral lesson. Animals which speak and act like human beings are common in fables.
fetishes	- venerated charms such as the Hopi tiponi.
goyemshi	- Mudheads or Hopi clowns representing the first men who lived in the earth.
Hopitu	- Peaceful Ones; the Hopis.

Kachinas	- Hopi spirits of ancestors. Hopi gods.
kivas	- an underground structure, entered by a ladder through the roof, used by the Hopi Indians for religious ceremonies. Underground chapels of the Hopi Indians; underground meeting rooms.
Koshare	- a society of Hopi clowns painted all over in black and white.
labrets	- lip plugs. An oval plug of wood, bone, or stone worn in a hole made in the lower lip.
legends	- legends are so interwoven with myths that little or no distinction can be drawn. In general, however, it may be said that a myth is wholly the product of the imagination, while a legend has some faint basis in history and stands chronologically between a myth and authentic history. Many legends have been so changed by additions and deletions that their origin in history is totally lost. A legend is a story coming down from the past, especially one taken as historically true though not verifiable.
manitou	- personal animal guardian.
medicine man	- among prehistoric Indians, one who professed to cure sickness, drive away evil spirits, and control the weather by the use of some object supposed to give power over natural or magic forces.
metates	- the flour mill of a Hopi family; three stone sided boxes sunk into the floor for grinding flour. The first had a fairly rough surfaced slab of stone hanging down into a box, the second a less rough surfaced slab, and the last an almost smooth surfaced slab.

myths	- narratives which attempt to explain (usually in complex symbolism) natural phenomena such as cosmic events (e.g. how the earth and sky came to be separated); pecularities of nature (e.g. why rain follows the cries of certain birds); origins of human civilization (e.g. through the beneficient action of a culture hero); the origin of social or religious customs or the nature and history of objects of worship. The truth of myths were unquestioned by prehistoric people because they were closely associated with religious rites and beliefs and dealt with the actions of gods or godlike creatures.
pahos	- prayer feathers. Usually made from an eagle's feather with willow sticks to represent man and woman and was meant to symbolize the nature of life and the mystery of creation.
pikani	- a dish of food made by roasting a mixture of ground corn and sugar in an earth oven.
piki	- a thin corn-meal batter mixed with a little wood ash cooked on a stone griddle; Hopi wafer-like cornbread.
prayer sticks	- little decorated paddles that could be left wherever it was thought a prayer was needed.
puberty	- the earliest age at which a person can beget or bear children, usually considered to be about fourteen years in boys and twelve in girls in temperate climates.
pueblo	- a village of the southwest desert area built of stone or adobe in the form of a communal house where Pueblo Indians lived.
rituals	- the established forms of conducting worship; religious ceremonials.

shaman	- Northwest Pacific Coast medicineman.
solstice	- the point, in the great circle of the heavenly sphere which is the apparent path of the sun or of the earth as seen from the sun, at which the sun is fartherest from the equator north or south--about June 21 and December 21.
tiponi	- sacred emblem of the Hopi clan; the holy embodiment of the clan's soul and history and also the clan's means of communication with its guardian spirits. The Hopi's tiponi usually consists of a perfect ear of white corn wrapped up in cotton twine and decorated with feathers.
totem	- an animal spirit that the Northwest Pacific Coast Indians thought would protect a clan; a carving of the animal on a pole; sacred animal of a clan of the Northwest Pacific Coast Indians.
tsetseka	- the ceremonial or supernatural season of the Kwakiutl.
Tusayan	- Spanish name for Hopiland.
yucca	- a desert plant having long, pointed, often rigid leaves on a woody stem and a tall spike of white blossoms.

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Appendix C No. 8

And then there were kachinas

Now Nelson has early examples of sacred images

By Donald Hoffmann
The Star's art and architecture critic

Five rare examples of centuries-old stone sculpture by Indians of the Southwest have entered the collections of the Nelson Gallery.

The pieces were donated by Mr. and Mrs. Lee R. Lyon of Aspen, Colo., formerly of Kansas City, and they are on exhibit in the Indian galleries on the second-floor mezzanine southwest.

They include four small stone figures, a head fragment from another figure and a circular stone shield that would have been attached to the back of a figure.

"They're not the beginnings of sculpture in the Southwest," said Ralph T. Coe, gallery director, "but they're certainly extremely early examples for a museum like this to have. Lee Lyon is a major collector of Indian art.

"As far as I know, there are very few examples of sculpture of any kind from this period, roughly 1100-1200. There is a proto-kachina—if that's what you want to call it—from Vernon, Ariz., in the Field Museum in Chicago. It dates, probably, from a little bit before our pieces.

"Then there's a wooden image from Hidalgo, N.M., that is in the New Mexico State Museum. It's like a playing card and has little, semaphorelike arms. It really hasn't a full human body. It has a rather owllike face . . . It's charming, and it was found in a cave. There were offerings—corn, prayer symbols, medicine pieces—in front of it.

"Then there are the Mimbres pieces that went to the Art Institute of Chicago. They are more monumental."

Proto-kachinas given to the Nelson Gallery

The Kansas City Star

12 April 1981

The pieces now in the Nelson Gallery, most of them painted in a geometric style, were found in a ruin about 24 miles west of St. Johns, Ariz., scattered on the floor of a room that appeared to be a kiva (a religious room).

"My feeling is that these were perhaps part of an altar," Coe said, theorizing that the sculptured figures might have stood upright to form a fencelike arrangement around the altar.

"The altar could have been on the ground. But these were found in a chamber scattered all over the place, in no order, a long ways apart from each other. It wasn't as if you had a consolidated grave-find.

"You'd have to say they are Anasazi, which means 'old people' in Navajo, and which we use for that early period when, so far as we know, there weren't Hopi. We don't know what the pueblo organization was at that time, or how sedentary these people really were.

"An awful lot of material made in that period has perished. That's all there is to that."

Coe said not enough is known to establish when such early votive sculptures evolved into kachinas.

"Finally, there comes the kachina image; but along with that comes the actual dancer—human beings as kachinas," Coe continued. "The kachina historically was used as an educational instrument for Indian children, as an instructional image—not a doll. What they represent are the messenger spirits that mediate between the gods and Earth. They come to Earth for approximately six months of the year; then they disappear. When they're here, they dance—but are, of course, impersonated by actual humans. There are about 350 kachinas in the repertory."

Coe said he wasn't giving up hope that archaeology someday would learn more about the proto-kachina images and how they were used in sacred ceremonies.

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12 April 1981

Appendix C No. 9

An Exhibit of a Kwakiutl House I Saw at the University of British Columbia Museum July 6, 1968

The house was built to scale and I estimated it to be about 100 feet long and 60 feet wide. It was built like an enclosed court covered at one end. Over the rest of the house there were just huge cedar beams spaced periodically. They were really logs, for they were still round, that is, they had not been cut into planks. There was a wide bench about three feet from the floor and 8 feet or 10 feet deep around the part under the roof. And on this bench were five little houses with small piles of wood between them. These were the private houses of each family. The explanation said they used them mostly for sleeping. The piles of wood were for cooking.

A carved house post was at each corner. In the center of the roof that extended over the courtyard was a huge carved potlatch type of bowl with a little hole in it. This was filled with oil. The hole let oil drip down on a center fire and kept it from going out. The roof extended beyond this figure only enough to hold it. In each corner of the courtyard was a fire. These were for the individual families. At one fire was a figure of a woman cooking. The man in charge of the museum said there had been other figures in the exhibit but someone had stolen them. One was of an old chief teaching a young Indian boy. There were four carved cedar setees in the courtyard. They had not made other figures for the exhibit for they were getting ready to move and revise the exhibit.

(For more information go to The Story of the Totem Pole by Ruth Brindze and Indians by Edwin Tunis.)

Appendix C No. 10

Hopi Agriculture

In the region where the present states of Utah, Colorado, New Mexico and Arizona meet lies a great desert tableland in the midst of a still greater desert known as the American Southwest. This was once the center of an Indian culture more advanced than any other that ever existed north of Mexico. Surprisingly, these Indians were farmers who grew all their own food even though they lived in an area of low and uncertain rainfall which, when it did come, was likely to occur as heavy thunderstorm showers resulting in flash floods causing gully erosion and water wastage.

To conserve this water for the crops various ingenious things were done. In the shallower gullies brushwood dams were constructed behind which mud and sand accumulated to form level flats on which crops could be eventually cultivated. Springs near the mountains were often dammed to make water cisterns, below which the land could be terraced into irrigated gardens. Since flooding from the heavy summer showers occasionally washed away much of the soil, the land owned by various clans was never permanently fixed and arrangements were made for changes of boundaries when necessary.

Each clan had several stretches of land in different parts of the village territory. This reduced the risk of crop failure. When the crop on one group of fields was withered by drought or washed out by floods, there still remained the chance that the others might be spared. Since the land was owned communally, all members of the tribe were cared for by this arrangement.

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The Hopi agricultural season opened in February with the clearing of the fields and ended in September or early October when the last corn and beans were gathered.

Each stage of cultivation was anticipated and regulated according to a precise calendar. This calendar was provided by the daily shift in the position of sunrise on the horizon. The smallest irregularities on the sky-line were well known and the most significant within the sun's path, probably some twenty or more, were named with reference either to their form, to ceremonial events, or to agricultural operations which fell due when the sun rose immediately behind them.

The daily observation of these positions of sunrise was the duty of a religious official, the Sun Watcher.

Maize or Indian corn was the most important crop. The first corn was planted towards the end of April. This early planting was important because it provided green corn for the ceremony of the Departure of the Ancestor Spirits at the end of July. The main corn planting was delayed as long as possible to escape late frosts and to obtain the greatest advantages of the summer rains. But even with all the care taken sandstorms were often a danger to the young corn plants.

Some watermelon and squash planting followed the early corn in the first week of May but the main planting of corn and beans, with more squashes and watermelons began two weeks later and might continue until midsummer.

The whole period of planting from the end of April until the solstice was governed and named from successive horizon points. These points were announced by the Sun Watcher.

Field parties of relatives and friends were formed and the helpers if they were not members of the household were paid with presents, reciprocal services, or the promise of a share in the crop.

A typical Hopi cornfield was about one acre in area with the rows three to four paces from each other and the seed holes two to three paces apart. The stumps of the previous year's harvest were left in place to provide guides for planting and to help hold the soil.

The seeds were planted nearly a foot deep and from ten to twenty seeds were dropped into each hole. The reasons for this were numerous: (1) Deep planting assisted in the development of the plant's root system. (2) It reduced the risk of the seedlings drying out. (3) It protected the seedlings from being washed away by heavy rains or flood. (4) The large number of seeds ensured against the ravages of field mice and cutworms. (5) The numerous seeds sprouted to form a young bush with a dozen or more stalks, half of which usually withered before harvest because of the effect of wind blown sand.

The heavier land in the middle of the valley was considered best for corn and sandier soil was preferred for beans and melons. The same crop was usually grown on the same land year after year. This was possible because the plants grew far apart so the soil was not exhausted all at once and also because flooding brought new nutrients to the fields annually.

The corn was of many colors--blue, white, red or pink. The blue and white corn ripened more quickly and had larger cobs. The red or pink corn did not yield as well as the blue and white corn but it was prized for a dish known as pikani which was made by roasting a mixture of ground corn and sugar in an earth oven.

The first corn was cut in July and roasted in pit ovens in the fields, but the main corn harvest began in late September and continued into the early weeks of October.

The corn was dried on the flat roofs of the houses and was then stored in the small windowless rooms at the back of the houses. A substantial part of the harvest was reserved for seed.

The squashes when ripe were cut spirally into long strips about two inches thick, then were dried in the sun, folded, and wrapped for storing.

Beans, squashes and melons were usually harvested before the corn in early September. Sunflowers were grown for their edible seeds which also produced a black dye.

Since the Hopi's grew their own food, hunting was never important to them. Game was relatively scarce and mainly antelope, deer, elk and especially rabbits. The winter season, when no agriculture was practiced, was the time for hunting. The skins were used for clothing and shoes. Skins and meat were obtained from other Indian tribes in exchange for corn.

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The needs of agriculture featured prominently in many of the Hopi rituals and ceremonies.

When a plot of land was first cleared, a slab of stone about one foot square was set up on edge somewhere near the middle of the plot. Every year when the land was being prepared in the spring "prayer sticks" were stuck in the ground against a smooth boulder before the eastern face of this shrine. These "prayer sticks" were bundles of two-colored rods and feathers to which were tied small packets of ground corn wrapped in a strip of corn husk. They were considered essential to the fertility of the fields and were also placed at the springs to ensure the water supply, and on fences to keep out sand.

Other ceremonies to ensure good crops occurred at various times throughout the year. During the winter "hockey matches" were played between the young men of the societies occupying the various kivas. A buckskin ball filled with seeds was used and the spilling of the seeds was believed to ensure a good harvest. But should the ball not break, the crops would likely fail in the coming season. During the first day of planting in a particular field, the men customarily ran a race. The speed of the running men was thought to promote the rapid growth of the planted seed.

The society particularly concerned with growth and fertility was the Kachina or Ancestor Spirits Society. From the end of January until late in February the Society conducted a ritual one of whose purposes was to ensure the success of the approaching season and to protect the fields. The chief retired to the kiva about a month after the winter solstice. There he planted beans in a small box-like receptacle and maintained a good sprouting atmosphere by constantly tending a fire to ensure a warm temperature and by frequently watering the planted seed. The success of this planting was believed to determine to a large extent the character of the coming season.

About two weeks later the Ancestor Spirits Society (or Kachina Society as it was sometimes called) assembled at night for another ritual. One man would wear a mask and in ritual during the night would impersonate the Sun's slow awakening, emerging at dawn to make a circuit visiting kivas and clan houses. At each stop he (still impersonating the Sun) would bow deeply and slowly to each of the cardinal points, symbolically retarding the motion of the Sun so as to prolong the growing period of the coming season. He then placed corn meal on the door of each building, received prayer sticks from the occupants, and gave them some of the bean sprouts which had been forced in the kiva. About a fortnight later the sprouts were used in an elaborate bean dance and were finally distributed among the men who would take them out to their fields and bury them.

At the summer solstice another effort was made to prolong summer. The clansfolk of the Sun Watcher prepared prayer sticks which were given to a boy who set out before dawn for the upper mesa. There he arranged the sticks in the ground in a line running north to south and awaited the sunrise. The boy then dawdled all the way home, hoping thereby to induce the sun to advance slowly.

Later in the season the time of the celebrated Snake Dance which was intimately connected with rain-making, might be delayed if the crops were late, on the assumption that the season might be prolonged or curtailed by advancing the ceremony beyond its proper time.

The increase of harvests by the indirect methods of rain making was also an element in many rites. Ceremonial smoking for rain occurred during many public ceremonies, prayer sticks were deposited in the direction of the cardinal points and even the custom that brides of the previous year should wear their white wedding blankets was said to "show the clouds they want rain."

It was also a common practice to douse a man with water before he set out on his first day's planting to ensure an abundance of water in the fields.

In the Hopi culture the leaders of clans and societies made no bids for personal prestige. They occupied positions of trust and carried out well defined duties. There was almost complete rejection of that preoccupation with personal prestige and prerogative which was carried to such extremes in the Northwest Pacific Coast Indian culture. Group action by clan, society, and village for the general good was the keynote of Hopi society. Fields and harvest were not narrowly defined as personal property, and the usual forms of distribution and inheritance were often adapted to meet the emergency needs of particular families.

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Hopi Homes

The Hopi Indians lived in pueblos or villages of from two hundred to three hundred people. Within these pueblos the different clans lived in tenement-like groupings, several stories high which were often terraced back to form an irregular pyramid. Occasionally the houses were set in long rows on either side of wide streets with enclosed courtyards within.

The sides were usually of roughly dressed sandstone laid into walls, one to two feet thick, without mortar. The roofs were flat and were made of brushwood and stamped clay laid on heavy pine beams.

Entrances to the houses were low and narrow and those to the ground floor rooms were often by a notched ladder running down from a hole in the roof.

The rooms were often very small with walls whitewashed with gypsum and floors paved with stone slabs. Much of the day's work took place on the flat roof and at the clay baking ovens set up outside the houses. The inner rooms of the lower stories were without light or ventilation and were only used for storing corn and utensils.

Indoor ceremonies were held in large rectangular rooms called kivas which were usually underground and were entered from the roof and notched ladder. At one end of the kiva was a small hole in the floor covered with a wooden plank in which a hole had been made. This was the entrance to the lower world by which the people and animals originally entered this world and through which the spirits came during ceremonies.

The kivas were also used as club-rooms by society members, and as places for retreat for priest-chiefs and others who at certain times had to retire from everyday activities.

While the clan was an enlarged family that usually lived in a cluster of households forming a kind of ward in the village, it frequently became so crowded with the different generations of the family that it could hold no more people, even though they were members of the clan, and could not have more rooms built alongside or on the roof of the building. When this happened a branch, that is a group of people, would split off to start a new household in another part of the village. But all these new households continued to recognize the original grandmother as their family head. This was how the clans became scattered among the different pueblos (villages) and why, for every clan, there was always a recognized senior household whose head was the clan mother.

Hopi Religion

Hopi religious symbolism was crystallized in the Road of Life.

Just as the day was divided into night and day so was the year divided into winter and summer, and an individual's existence into life and death. Life was spent in the upper world--the summer or day of his total existence. Death was spent in the lower world--the winter or night of his total existence. The path of the sun symbolized the Road of Life--from sunrise into sunset of life, and then into sunrise of death.

The entire course of the Hopi Road of Life was unfolded every year in an annual cycle of nine great religious ceremonies that dramatized the universal laws of life.

All the important Hopi ceremonies were held in the kiva or special underground chambers. The kiva originally was the storage place for corn and seed but later became larger and eventually was the religious center of the pueblo.

Unlike a Christian church where the altar is always raised above the level of the ordinary worshippers, the kiva altar was placed below the floor level and at the western end of the kiva.

The two most important symbols used in the course of the rituals were the pahos, or prayer feathers, and the corn mothers.

The paho was usually made from an eagle's feathers with willow sticks to represent man and woman and was meant to symbolize the nature of life and the mystery of Creation.

Since corn was the mainstay of Hopi agriculture, the corn mother assumed great importance. During the harvest the Hopi Indians searched for a perfect ear of corn where the tip ended in four full kernels to be the corn mother. This perfect ear of white corn was wrapped up in cotton twine and decorated with feathers, and became the sacred emblem--the tiponi or fetish of the clan. It was very like the "medicine bundle" of other tribes.

Among the Hopi Indians these sacred emblems belonged to the clans rather than to an individual. They were the symbols of the histories of the clans and their means of communication with guardian spirits.

The clan mother took care of the tiponi of her clan. It "lived" in her house and she "fed" it with offerings of corn meal. It never left her care except when its priest took it to the kiva for the ritual that his clan promised the pueblo as the price of admission many years before.

The priest of that ritual had to be a member of the clan that owned the tiponi. He was usually the clan mother's oldest brother and was the only one who could conduct the ceremony through which the tiponi used its powers to bring rain or cure diseases, and then only if his heart was pure. At an early age he was selected for being a priest by his mother's brother and from childhood was trained in the behaviors required of a priest, in being the kind of a person worthy of being a priest, and in using the power of the tiponi for the good of all in the pueblo.

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There was a secret religious society for each sacred ritual. Any grown-up man could join the society if he was qualified and accepted its responsibilities. Sometimes a man joined the Snake Society because the society had done something for him, such as curing a snakebite. Sometimes he had to join a particular society because he trespassed accidentally upon a secret ritual. There were a number of these societies, including three that women might join. Every grown man had to belong to one of the four important societies, and he could join as many others as he wished. All the important societies had their own kivas.

These societies actually controlled the general affairs of the village. They provided what government the Hopis had. The priest-chiefs of the different clans (the kiva chiefs) made up the "Chiefs Talk" or the council of elders who set up the calendar of ceremonies. The chairman of the "Chiefs Talk" was the priest-chief of the clan who founded the pueblo and therefore usually of the Bear Clan.

There were many priest-chiefs among the Hopis. But being a priest-chief did not indicate his sole function was to perform sacred rites and ceremonies and that he had power to rule or command. Instead it indicated some priestly function. Among these functions were being the Crier Chief, the Sun Watcher (who kept account of the dates and seasons), and the War Chief who kept outsiders out of the pueblo during certain ceremonies. Every Hopi man took part in one or more of the major ceremonies, after which he continued with his ordinary work at home or in the fields.

The nine great Hopi religious ceremonies were divided into three groups: the three winter ceremonials, the three summer ceremonies, and the three ceremonies of the Women's Societies.

The three winter ceremonies were called Wuwuchim, Soyala, and Powamu.

Wuwuchim, or grown-man ceremony, took place in November (the month of the Hawk Moon) when the days grew short, and nothing grew in the earth. The ceremony lasted sixteen days--an eight day period of preparation and an eight day period of secret rituals in the kivas, followed by a public dance on the day concluding the ceremony. Like the Soyala, or winter solstice ceremony that opened the year, it required the participation of all since it was conducted jointly by the societies to one of which every man had to belong.

An important part of this ceremony was not only the initiation of young men into the full status of Hopi adulthood but also the New Fire ritual. When all the trails to the village had been closed by drawing four lines of sacred cornmeal across them and the women and children had been hidden in the houses, all fires in the kivas and homes were extinguished. Then the village chief kindled a flame by the method of friction. Brands were carried from it to the other kivas and from there to all homes in the pueblo. It was a promise that the world would come out of the darkness of winter--a promise of the coming Soyala, and the rekindling of the sun's flame.

The ceremony of Soyala occurred during December at the winter solstice, the month of the Respected Moon, and its function was to aid and direct the new life processes initiated by the preceding ceremony of Wuwuchim.

Soyala lasted twenty days, an eight day period of purification and preparation, followed by an eight day period of rituals and concluding with a rabbit hunt, feast and blessing rites lasting four days more.

Announcement of the ceremony was made by the Soyala Kachina who sang and planted four Soyala pahos at the entrance of the chief kiva of the village. Other Kachinas also participated in the cause of the ritual, and all the observances were designed to ensure a happy and bountiful year.

The Powamu ceremony was the third of the winter rituals and its function was to "make pure" the pattern of life for the coming year. The complete ceremony lasted sixteen days--eight days of preparation, followed by eight days of ritual--and was usually held in January.

The first important ritual of the Powamu ceremony was the planting of beans in the kivas during the first four days. By careful treatment the beans would sprout in eight days--a beautiful green-leafed growth in the dead of winter--symbolizing the first complete physical form of life to appear in this phase of creation. Later the bean plants were distributed to each home in the village along with presents for the children.

Corn was the most important plant of the Hopis and it appeared in all ceremonies, but it did not sprout as easily in the conditions maintained in the kivas.

Every Hopi child upon reaching the age of six or eight had to be initiated into either the Powamu Society or the Katchina Society. The Powamu Society was the more important. Initiations were usually held every four years and the novices, or children to be initiated, were called young hawks (i.e. hawks not yet ready to fly). Included in the ceremony was an ordeal by whipping, each child being struck four times.

At the close of Powamu, monster or "scare" Kachinas appeared. One of their functions was to stop at each house and demand whether any children had been disobedient. If they found any such children, these children would be led outside and doused with cold water. The monster Kachinas (or Sosoyoks) were often placated by the mothers with offers of food.

The three major summer ceremonies were Kachin-Nima (or Niman Kachina), the Snake-Antelope Ceremony and the Flute Ceremony.

Kachin-Nima simply meant the "going home of the Kachinas." Having helped Man to establish the Creation pattern of the year and having seen the maturing of the first fruits, the Kachinas now departed to their lower world homes. The Kachin-Nima was thus the ceremonial departure of the Kachinas for the six month period until Wuwuchim, the first of the winter ceremonies.

Kachin-Nima took place at the time of the summer solstice in June, and was controlled by the Badger Clan. The ceremony lasted sixteen days and one of the most important rituals was the pilgrimage for spruce. The spruce was considered to have the magnetic power to bring in the clouds and moisture. Branches and twigs of spruce were worn by all Kachinas.

Three men were selected to undertake the arduous "pilgrimage for spruce" which was a journey to Kisiwu (Spring in the Shadows) about forty miles away--a three day round trip. A special ritual was performed at the spring, which was once the home of the Badger Clan. Branches of spruce were then cut along with two small trees about two to three feet high. The trees represented Man and Woman and were carefully planted in the village square on return to the village.

The Kachin-Nima included the Home Dance when colorful and elaborate costumes were worn by the participants, and a long and involved ritual was sustained for a whole day. After the dance, twigs of spruce were taken by the villagers to their homes and were later planted in the fields.

At the concluding ritual eagles were sacrificed with the object that their spirits would accompany the Kachinas on their way to their homes in the lower world.

The most spectacular of the Hopi ceremonies was the Snake Dance held in August. Its purpose was to bring on the late summer rains without which the last crop of corn would die. It was held every other year.

The chief of the Snake Clan who was also the chief of the Snake Society observed the weather signs carefully for some time before he finally informed the village that the Snakes wanted to dance. The village crier then announced the beginning of the sixteen day ceremony that commemorated the arrival of the Snake Clan.

For eight days the members of the Snake Society scoured the country for snakes. Anyone who trespassed upon them during the hunt had to join it and the society. They gathered all the snakes they could find and brought them down into the kiva to be prayed over and to have their heads ceremonially washed in preparation for the dance. In the kiva even the rattlers were handled with the utmost unconcern for danger by even very young boys who picked them up without fear and kept them herded on the sacred sand painting.

On the final day of the ceremony there was a public dance. All of the snakes were put into a little brushwood shelter and while the men of the Antelope Society, who held their ceremony jointly with the Snakes, sang one Snake dancer after another reached into the brushwood shelter and pulled out whatever snake came to his hand, held it in his mouth and "danced his elder brother" around. Another snake dancer danced with each snake carrier keeping one hand on the carrier's shoulder while using the other hand to brush the snake's head with a feather, as if to keep it from striking.

After the dance all the "elder brothers" were dumped into a corn meal circle--a squirming, terrifying mass, from which they were gathered up in armfuls, blessed with corn meal and carried down from the mesa to be turned loose to the four directions from which they came. The human dancers then took a strong emetic to make them vomit away the dangerous sacred power which they had been handling.

On the years when there was no Snake Dance the Flute Dance was held in August. It, too, was for the purpose of bringing rain. This ceremony celebrated the advent of the Rain Makers Clan and the organization of the Flute Society. The kiva rites were focused on the singing of songs to flute music. At the public dance the young children were the main performers in the morning, and the youths and maidens in the afternoon. The older men sang for both groups and coached them. After the dance all went to a sacred spring, into the reservoir of which the priest-chiefs dived and planted prayer sticks on the bottom.

During and after the harvest in September and October there was a kind of interlude of three ceremonies of the Women's Societies. These ceremonies celebrated women's work and thanksgiving for the women's harvest. They, too, had their eight day kiva rites before the public dance.

In some villages the women's societies had their own kivas, but in others they borrowed them for the occasion. Their customs, prayer sticks, sand paintings, and altars were made for them by men for in the Hopi division of labor it was the men who were the priest-chiefs.

Hopi Myths of the Creation

Christians, Moslems and Jews believe in the creation of the universe, of the world, and of the earth as it is recorded in the first chapter of the Book of Genesis in the Bible.

When the white man came to America, no Indian had ever heard of the Bible, but the Indians were interested in the beginnings--the creation of the earth and of all living things in it. The Book of the Hopi by Frank Waters gives one story which describes the creation by Taiowa:[1]

> At first there was only the Creator, Taiowa, the Sun God. Then he created Sotuknang (whom he called his nephew) and gave him instructions to lay out the universes in such a way that they would work harmoniously with one another and in a way harmonious with his (Taiowa's) plan.
>
> So Sotuknang went to work and made nine kingdoms, each of which was divided so that half would be solid earth and half would be water.
>
> Then he gathered the forces of the air and made them into winds.
>
> Taiowa next directed Sotuknang to create living things and Sotuknang created first her who was to be his helper, Kokyangwuti, the Spider Woman.

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[1] Frank Waters, Book of the Hopi (New York: The Viking Press, 1963), p. 3.

When Kokyangwuti awoke to life and received her name, she asked, "Why am I here?"

Sotuknang replied that although the earth had been created there was no life upon it, no joyful movement and no joyful sound, so she had been made and given the knowledge, wisdom and love to help create life upon the earth and to bless all the beings created.

To follow Sotuknang's instructions, Spider Woman took some earth, mixed it with saliva from her mouth and molded it into two human beings. Then she covered them with a cape which was made of a white substance that was the creative wisdom, and sang the Creation Song over them.

When she uncovered them, she had created twins.

They sat up and asked, "Who are we and why are we here?"

Spider Woman looked at the twin on the right and said, "You are Poqanghoya. When life is put upon this world you are to help keep it in order. Now go all around the world and put your hands upon the earth so that it will become fully solidified."

Then she said to the twin on the left, "You are Palongawhoya and you are to help keep this world in order when life is put upon it. But now, you are to go and send out sound that may be heard throughout all the world. When this sound is heard, you will also be known as "Echo" for all sound echoes the Creator.

The twins did as they were told. Poqanghoya traveled over the earth and made the higher parts of the world into great mountains and the lower parts firm and pliable so that those who were placed upon it could use it and would call it their mother.

Palongawhoya sounded out his call throughout the earth. The whole earth trembled, as it resounded his call. The whole world was made an instrument of sound for carrying messages and resounding praise to the Creator of all.

When Sotuknang heard the sound, he said to Taiowa, "This is your voice Uncle. Everything is tuned to your sound."

And Taiowa said that it was very good.

When they had finished their duties, Poqanghoya was sent to the north pole and Palongawhoya to the south pole where they were jointly commanded to keep the world properly rotating. Poqanghoya was also given the power to keep the earth in a stable form of solidness and Palongawhoya was given the power to keep the air in gentle ordered movement.

"These will be your duties in time to come," said Spider Woman.

She then created trees, bushes, plants, flowers, "all kinds of seed-bearers and nut-bearers to clothe the earth, giving to each a life and name. In the same manner she created all kinds of birds and animals--molding them out of earth, covering them with her white-substance cape, and singing over them. Some she placed to her right, some to her left, others before and behind her, indicating how they should spread to all four corners of the earth to live."[2]

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[2] Ibid., p. 5.

Sotuknang was happy when he saw how beautiful it all was. He said to Taiowa, "Come see what the world looks like now."

"It is very good," said Taiowa. "Now it is ready for human life, the final touch to complete my plan."

So Spider Woman gathered earth of four colors, yellow, red, white, and black, molded them and sang them the Song of Creation.

And they came to life as four male beings. Then she created four other beings after her own form (female), to become partners to the first four male beings.

She then asked Sotuknang to give them speech, since they could not talk. He did so, giving a different language to each color. He also gave them wisdom and knowledge of how to cultivate plants and crops, the most important of which was corn.

For a long time the people were content and happy and they spread all over the world, but then came some bad animals and creatures who began to lead the people astray and make them quarrel and fight among themselves.

First was Mochni, the mockingbird, then came Katoya, the snake, and they caused so much trouble that Sotuknang decided that all the bad people would have to be destroyed by fire. He saved all the good people who then began life anew in the Second World.

All went well in the Second World for some time, but as the people grew more wealthy they became greedy and quarrelsome, and once again Sotuknang decided to destroy the world, this time by freezing it so that the surface was all ice and saving only the few people who were good. These good people entered the Third World.

By this time the people had learned how to build and live in large towns and cities. For a while they were all happy, but then one village became envious of the next, and so wars began. Sotuknang decided once more that the world would have to be destroyed, and this time he covered it with water, but he again saved the good people.

The Spider Woman sent her two twin sons to bring the good people into the Fourth World or the world where we live. With their help the different clans of men finally emerged one by one through a hole in the earth. This hole was the Sipapu, the Place of Emergence, under the San Francisco Mountains. The people dried out in the sunshine, lost the webs on their hands and feet and each clan began to wander separately eastward toward the place of rising Father Sun. After many adventures with animals and spirits, which gave clans their present names, they finally found their way together again at Hopiland.

The first to arrive at Black Mesa and settle down on it was the Bear Clan. Then over time, the other clans arrived, sometimes because of drought or sometimes to flee from nomad tribes. They asked permission to join the pueblo and to have a share in the land and water.

If the clan asking permission was the Snake Clan, the Bears might have said, "Well there is probably enough land and water for all, and we could use more clans to marry into, but will you be of help to the pueblo? Are you good Hopis or are you quarrelsome? How do you fit into our world? How do you get along in the spirit world? What can your clan do?"

And the Snakes might have answered, "Through our elder brothers, the snakes, and our sacred ritual, we can help bring the August rains, and we can cure snakebites."

Other clans who asked to join the pueblo offered other ceremonies and rituals for bringing rain and for curing other diseases. The Cloud Clan passed the test for admission by making a new spring gush out of the rock. They did this by planting a water jug as a "seed."[3]

Clans could work these magics because of the possession of a certain sacred object, or tiponi, they had obtained during their wanderings and because of their name.

Each clan added something special to Hopiland and enriched life at the pueblo.

The previous worlds had been destroyed because of bad people. In each case of the destruction of the world the good people had been saved and when they died they were transformed into Kachinas and passed immediately to the next world.

The Katchinas represented good spirits whom the Indians called upon to help bless them with rain and good weather to ensure the abundance of crops and the continuation of life. The Katchinas remained on earth for six months of the year. The Hopi children were given small figures or dolls carved of cottonwood roots, correctly painted and costumed as replicas of the Kachinas so that they might learn to recognize the real Kachinas.

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[3] Gene Lisitzky, Four Ways of Being Human (New York: The Viking Press, 1956), pp. 251-252.

Appendix C No. 14

Northwest Pacific Coast Indians

An Introduction to These Indians

Along the narrow strip of shoreline which extended from Yakutat Bay in Southeast Alaska to Trinidad Bay on the coast of what is now northern California lived a number of Indian groups who shared a common culture.

Those most commonly thought of when these Indians are mentioned are seven different linguistic groups along the shoreline from Puget Sound to the Alaskan panhandle. The most northern of these tribes were the Tlingit and Tsimshian. The Haidi tribe lived further south on Queen Charlotte Island, and the Bella Coola still further south. The Nootka tribe lived on the west coast of Vancouver Island and the northern region of Vancouver Island and the mainland directly opposite were the homes of the Kwakiutl tribe. The Salish occupied the delta of the Fraser River, some southern parts of Vancouver Island and were distributed southward down the Washington Coast. One group of Salish Indians also lived near the Bella Coola River in the north.

Other lesser known tribes sharing this culture lived along the coast southward from Puget Sound to Trinidad Bay. Four of these groups were the Quileutes, Quinaults, Chinooks and Klikitats.

The villages of large plank houses in which these Indians lived were built facing the sea, which was the road they traveled, in beautiful canoes both large and small, when they set out to trade, hunt, fish, make social visits or wage warfare.

The men of these tribes were essentially fishermen and had perfected an elaborate fishing technology for harvesting the sea mammals and fish, of which the salmon was the most preferred. This technology was the basis for a standard of living unrivaled among tribal cultures that had no agriculture. They preserved the fish by smoking, drying, and processing them for oil. This freed them from searching for and acquiring food during the long winter months and gave them leisure time to devote to their ceremonial life and to their material wealth which was displayed in painting, carving, and weaving.

Their large permanent houses, great canoes, totem poles, house carvings, and other objects of social and domestic life were made from the red cedar trees of the rain forest. A variety of textile arts carried on by the women was also dependent upon the cedar trees. They used fibers split from the narrow rootlets and bark stripped from the green living trunk to weave fine baskets, hats, mats, blankets, and the clothing of everyday use.

In addition to sharing a common environment and similar technologies these tribes also shared a number of beliefs. Their mythologies involved legends in which original ancestors had been given special privileges by the supernatural beings of earth, sea, and sky. These myths and privileges were valued property which were handed down to their descendents. In the three northern groups property was inherited through the maternal line; in the south through the paternal line; and in the central group both maternal and paternal inheritance were the practice. Society in all of the groups was organized according to social rank, from those belonging to the highest social ranks to those who had inherited positions of little importance or none at all. Slaves taken in warfare were outside the social system, but they like those in the social system contributed in some way to the elaborate social life of the potlatch which was centered around the establishment of social class and was marked by the ceremonial distribution of hospitality and gifts. On the potlatch occasions totem poles and heraldic carvings were often erected to mark the special cause of the celebration and the dances, songs and theatrical performances presented showed special inherited privileges which were witnessed by invited guests, often from other tribal areas.

The emphasis of these ceremonies and activities varied somewhat with the tribal groups. The next sections describe some aspects of the social life and ceremony of the Kwakiutls as representative of the Northwest Pacific Coast culture.

The Ceremonial Year

Summer time was Bakoos time, a time for travel, summer camping and the gathering of food. But when it was over and the wet, cold, winter months came, the Kwakiutls went back to their home villages and their large, cedar plank houses. These months were the time of elaborate theatrical performances and ceremonies. It was the Tsetseka season, the ceremonial or supernatural season. Their ceremonials were not primarily concerned with religion, as was true of many other

Indian cultures, but were also given to enrich the social life of the tribe, and to enhance the standing of the family or clan who initiated the ceremonies.

At the Tsetseka season a new social order went into force. The supernatural spirits of the tribe's ancestors came to live among them and to initiate the young into the dancing societies. Everything was different from the rest of the year. Clans, rank, and Bakoos names were replaced by a system according to how each person was related to the spirits. Only those of high rank were eligible to join the highest ranking spirit dances, but each person, regardless of his rank, had to be formally initiated into the society his inheritance entitled him to join.

The Potlatch

The Kawkiutls of high rank wanted others to recognize their wealth and social status. The same thing was true of the lineage group and of the different villages in relation to each other. This desire was expressed in the potlatch ceremony.

The word "potlatch" means "to give." Elaborate feasting and hospitality, along with the giving of gifts, were the core of this ceremony without which no important social event could take place and no claim could be made. All of the names, ranks, privileges, and honors of the lineage inheritance were meaningless without this formal ritual of hospitality and the acceptance of gifts by the guests.

The reasons for having a potlatch among the Kwakiutls were numerous: the transfer of marriage privileges, the assumption of a new name by a youth or the giving of a new rank, the new use of a family crest, the initiation of a new dancer into the dancing societies, are examples. Among the northern coastal tribes a series of mourning cycles and the raising of mortuary poles to a deceased chief were important occasions for potlatches, and among the Haidas the raising of a new house and the introduction of a new lineage chief.

The procedure of the potlatch went something like this: The lineage chief consulted about having a potlatch with the older members of his household group. When it was agreed that a potlatch should be held and a date had been set, preparations began. Ceremonial clothing was prepared; dishes and spoons made; food over a period of time was gathered, prepared and stored; enough gifts such as mats, baskets and boxes, furs, canoes, jewelry and dishes, to give to all were made; the needed goods bearing the family crest carvings were accumulated; and dances, songs and theatrical performances practiced.

Messengers of the chief were sent to invite guests.

When the date of the potlatch arrived, the chief dressed himself for the ceremonies in clothing which consisted of family heirlooms as well as some which were new and would become heirlooms later. An example of such an heirloom was the Chilcat blanket. It was decorated with a design derived from the family's mythological history and had a traditional style. Leggings of the same material and a ceremonial headdress with an inlaid forehead plaque bearing the family crest in the carved face of an animal were worn with it. He often used the raven rattle with this costume when he or his speaker wished to get attention and speak to the guests.

The family of the host with the song leader and the speaker, all in their finest robes and headdresses, stood on the beach singing and dancing to greet the visitors as they came by canoe. Sometimes large figures carved of wood were placed on the beach facing the sea to add to the welcome. Visitors were announced by the speaker and were seated according to their rank in a traditional seating arrangement.

The guests, during these ceremonies, lived in the ceremonial house and were given a feast-like meal each day. For the feasting, food was served in large dishes often carved in the form of animals. The spoons were carved from mountain goat horn and decorated with the motifs used on the totem poles of the lineage. The food was passed around, according to proper ritual, as the speaker explained the ancestral name of the food dishes and their history.

One or more major events were featured each day. Family dances and dramas were given by dancers in masks and costumes to the accompaniment of songs and explanations by the speaker. On some days members of the family were introduced into the dancing societies. Each occasion was followed by feasting, oratory, and some gift distribution.

Potlatch gifts were given as free donations by the host and members of his household. They were given in order according to the rank and position of the tribal lineage heads. Correct order was maintained by an official who called out the names as the gifts were given. The most important chiefs received the important and generous gifts while people of little rank received token gifts. Gifts as payment were made to the carvers and others who had helped in preparing the potlatch.

If the potlatch was successful, all of the family group shared in the glory and pleasure of the social effort.

The potlatch made possible a wide distribution of goods and kept them moving as various forms of wealth, among groups and individuals. It has been described as life insurance for the next chief, because he would receive all of the returns and interest for loans out in the old chief's name at his death. There was, however, one aspect which could not be described as life insurance. The new chief owed to others the loans that had been made to the old chief.

The potlatch was socially benefitting for households, for all of the members got social recognition for their cooperative effort. It was also socially benefitting as a face-saving device. If a mistake was made in public in ritual or etiquette by a member of the lineage, it could be wiped out by a potlatch. Those who received gifts would never refer to it again.

A special class of objects called "coppers" was associated with the potlatch. These large shield-like sheets were hammered out of copper found along the Copper River in Alaska. They were traded southward as far as Southern Kwakiutl territory. Among the Tlingit, Haida, and Tsimshian, it was almost essential that one or two of them be used at the potlatch in honor of the dead chief when a new chief took over, and that they be broken and thrown on the fire or in the sea. The coppers were valuable to these people, but more valuable to the Southern Kwakiutls. Among them the value of a copper increased each time it was given away, whether in a potlatch or in connection with bride prices or dowry. Some coppers attained values of several thousands of dollars.

Kwakiutl Dancing Societies

There were four main groups in the dancing societies of the Kwakiutl. The most important was the Hamatsa society under the supernatural spirit Bakbakwalanooksiwae, a powerful man-eating spirit, represented in the dance by the cannibal dancer or Hamatsa, in human form. The second group was under the supernatural spirit Winalagilis, the war spirit initiator. The Atlakim dance series was the third group, and the fourth group was made up of the Dluwalakha dancers. Only the Hamatsa ritual will be discussed.

Hamatsa Ritual

To become a full-fledged Hamatsa a youth must have danced twelve years, four years through each of three levels. When the novice (youth) was ready to begin the series, the Hamatsa senior of his family line would retire in his favor. Usually the novice had already completed several other seasons of dancing in lower ranking societies before he began the Hamatsa series. All of these stages involved feasting, gifts, and ceremonial costs. Only people of wealth could afford them.

The popularity of the Hamatsa resulted from the complex cast of characters and the dramatic ritual which took at least four days to complete. It was based upon legends of the bird-monsters who lived in the sky-world and were eaters of human flesh, terrifying apparitions that searched for human bodies to eat. The horror the bird-monsters inspired was heightened by the drama which accompanied it and was unfolded before the audience.

The performance consisted of the novice being seized by the Hamatsa initiating spirit, his disappearance into the woods, his four day frenzy, and his ritual taming to the point where he became human again and a full fledged member of the dancing society.

The chief cannibal spirit was Bakbakwalanooksiwae, who because he was invisible, made his presence known through a weird whistling sound. He had a large household in the sky, and the members of his household were portrayed in the dances of the Hamatsa society. These included Hamatsa, the representative cannibal spirit of Bakbakwalanooksiwae; the Noonsistalahl or fire thrower, who was obsessed with fire; the Hamatsa's two attendants--Komunokas, the rich woman, and Kinkalatlala, a female slave--who always danced with him; Kwakwakwalanooksiwae, the cannibal raven; the Hokhokw, a fabulous long beaked bird-monster; Galokwudzuwis, the "crooked-beak" bird monster; Nanes Bakbakwalanooksiwae, the cannibal grizzly bear, Hamshamtsus, a less-violent cannibal; and Noohlmahl, the fool dancer.

The novice disappeared when the Hamatsa whistles sounded in the woods. He was invisible for a period of time during which it was said he was being initiated into the ways of Bakbakwalanooksiwae. With Bakbakwalanooksiwae were his two companions, Komunokas and Kinkalatlala.

When this initiation was over, the novice appeared wearing hemlock branches in his hair and around his waist, over his shoulders, and around his wrists and ankles. He uttered cries of "haap" (eat) and was in a state of animal-like ferocity, trying to bite people, and often breaking away from his captors, who were members of the society and were trying to soothe him and make him human again. In this wild state he ran into the woods, was brought back, and jumped down from the roof back into the room. At first he danced very low, with a crouching step, hands and arms akimbo, eyes staring, and his head turning this way and that, trembling, disturbed and agitated by his spirit. Key words such as "body" and "eat" uttered by the audience or helpers, caused him to go into frenzied fits, and finally to disappear into the closet at the rear of the house behind the screen. When he came back out, he was wearing cedar bark ornaments.

While he was absent, senior members of the Hamatsa society, who were representing the various bird-monsters, performed their dances in turn wearing masks with red cedar bark fringe and long cedar fringes which partially concealed their bodies and legs.

At the back of the house, a great cannibal tethering pole was put up. It was fastened loosely so that it seemed to give way when the novice was tied to it, giving the illusion that it swayed because of the novice's supernatural strength.

After four days and four nights, during which the novice was offered "human" flesh to eat and ducked in sea water, had fish oil poured on him, and smoke and fire blown over him, he (the novice) finally became quiet. Wearing his cedar bark head ring, neck rings, and a blanket, he danced and sang like a full fledged Hamatasa and was given a new Hamatasa name. Last of all, four officials performed a series of purifying tasks over him so he could take part in the activities of the society while new novices were being initiated.

Sensational stage effects were produced in various ways. Tunnels and trap doors were made so dancers could miraculously appear and disappear. Lines of hollow kelp stems were concealed under the floor and were used as speaking tubes to make the performers voices come from various and unexpected places. Puppets and monsters were made to fly across the house by ropes. All of this created a spectacular sight at night in a huge house lighted only by a blazing fire in the central hearth.

The masks used were varied and complicated. Some were very human in appearance and others were very intricate. The Hamatsa bird-monster masks were worn with cedar bark fringes hanging down from the shoulders and hiding the dancer who was further covered by a long cape of shredded cedar bark that fell to the ankles. The lower beak of the mask was jointed, so that when the right string was pulled it shut with a clap. These bird-monster masks were made to be worn on the forehead with the cedar bark fringe covering the face and shoulders. They varied in length from less than two feet to more than eight feet, and weighed from two to sixteen pounds.

The usual colors of these masks were black, with details of white paint and red added to the nostril or beak. Most of them were both carved and painted. A few had small wooden skulls added to the cedar bark fringe. These skulls were characteristic motifs of the entire Hamatsa drama.

Masks were also frequently used in the ceremonial occasions when a shaman undertook to cure the sick by incantations and by showing his power of the supernatural. These masks indicated the spirit he was calling, and if he was a Nootka shaman he performed a dance in which he changed masks to show the various spirits with which he was familiar. Usually they were oversize, basically human faces decorated with designs like the ones they used in facial painting.

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Appendix C No. 15

Shamen of the Northwest Coast

It was generally accepted among the Northwest Pacific Coast Indians that an individual's good or bad fortune depended on a spiritual helper. An individual who later became a shaman gained the favor of such a supernatural spirit after a long, hard, search in which he cleansed himself of things offensive to supernatural beings. He did this by going into lonely places for fasting, keeping unsleeping vigils, scrubbing himself with harsh bundles of twigs and nettles, and seeking and praying for the aid of a supernatural spirit. When he became ritually pure, he received such help from a supernatural spirit who taught him the songs he should sing, the supernatural magic or power he might display, and the amulet, or other signs of power he should wear.

After such a vision, he began to practice his shaman powers, but he often continued to increase his range of abilities by paying other shamen of the region to reveal to him their special powers, songs, and talismans. Talismans were engraved figures supposed to produce extraordinary effects in averting evil.

The shaman was primarily a healer sent for in times of sickness, which was generally believed to be caused by one of two things-- a foreign, evil, object wrongfully taking possession of the sick person's body, or by the sick person's soul going astray or being stolen. The shaman's task was to summon his spirit helper by singing and dancing until his supernatural assistant gave him the power to remove the disease object or find the strayed soul. Every shaman had a medicine bag. Its contents were such things as eagle feet, eagle feathers, and other charms which he had gained during his vision, or which he found and tested for their magical powers.

The regalia and gear of the shamen varied among the different Northwest Pacific Coast groups. The Tlingits and Haidia let their hair grow and never combed it. They wore elaborately carved necklaces of bone, and had a special bone tube to blow sickness away and to catch souls. Some Tlingit and Tsimshian medicinemen used rattles carved with figures of the raven and frog. The Haidi accompanied their songs with carved rattles. When they began a cure, the Tlingits usually wore masks. The Kwakiutl, Nootka, and Bella Coola medicinemen put on turban-like headbands and neck-rings of shredded and dyed cedar bark. Some Salish shamen had spirit canoe boards, representing beings who assisted them in their dramatized journey to recapture a lost soul.

Among the Northwest Pacific Coast Indians mentioned above shamen were generally, though not exclusively, men.

Appendix C No. 1[illegible]

The "Chilkat Blanket"

An elaborate robe worn on ceremonial occasions by people of rank of all northern tribes was the so-called "Chilkat blanket."

The name was given the garment by the English because they were woven only by the women of the Chilkat division of the Northern Tlingit Indians. There are indications, however, that other Tlingit divisions may have made them and that the technique may have been borrowed from the Tsimshian Indians.

The robes were woven of yarn spun from mountain goat wool on a core of yellow cedar-bark twine. Men hunted the goats that provided the wool; made the loom, which had a single bar from which the warp hung free; made the various measuring sticks; and painted the pattern boards from which the designs were copied.

Women spun the yarn; dyed it so they had not only the natural color of the carefully washed yarn, but also blue, yellow and black; did the necessary measuring; strung it on the loom bar; and with a "twilling twining" technique wove it into a design copied from a pattern board. They finished the robe with a long fringe of untwined wool for decoration.

Appendix C No. 17

totem poles with the stories they tell

BY
BOMA,
VANCOUVER, B.C., CANADA

THE Northwest Coast Indians believed that in the beginning all living things shared the world in a state of equality and mutual understanding. They spoke the same language and the difference between them was in their superficial external appearance. If, for convenience, this body covering was removed, the form underneath was identical with a human form. This allowed a human to live with birds and animals and return with their secrets to hand on to his people.

From this belief, the Indians developed a series of legends and myths, many of which are illustrated in their totem pole carvings.

On a single pole there might be illustrated one simple tale or several events in tribal history, legendary or actual. Almost every tribe and clan prized at least one story of an encounter between an ancestor and a spirit, usually in the guise of an animal. Following a series of exciting adventures, the man would be granted the right to adopt the animal as his crest. His descendents inherited this right, and so carved a stylized and abstract likeness of their badge on their poles.

The following are brief descriptions of the mask personalities which appear on most poles.

WHALE, the much-feared Ruler of the Deep, can be recognized by his dorsal fin. Understandably, among a people who depended on the sea for their staple food, Whale usually was the villain of Indian legends. One tale deals with the kidnapping of a beautiful young girl by Whale. Her husband was able to rescue her only with the assistance of friendly birds and animals, and after practising black magic. It was a common belief that should a fisherman drown, his spirit would return in the guise of a Whale. To insure a good catch, the Indians would precede each fishing trip with a dance to the Killer Whale to show their goodwill.

RAVEN, centre of many legends, is a rogue—mischievous, sly, thieving. Despite these characteristics, he was an asset. One legend states that he stole the salmon from the Beaver by rolling up their lake, absconding with it, and letting the salmon loose in the rivers, thus giving the Indians their staple food. He is also credited with stealing the sun from the chief who kept it hidden in a box. He managed this by turning himself into a pine needle, arranging to be swallowed by the chief's daughter and thus being born into the chief's house as his grandson. A pampered child, he finally persuaded his doting grandparent to give him the sun to play with. Seizing his opportunity, he changed himself back into Raven, flew through the smokehole and flung the sun into the sky to provide light. Because of this lengend, Raven is often depicted with a disk in his straight beak.

WASGO (or SEA WOLF). The legend of Wasgo concerns a young gambling man with a nagging mother-in-law. Dressed in the skin of a sea monster, he caught various fish by night, until he was finally overpowered by a pair of whales. He returned only to take his wife to an underwater home. Good luck will come to any fortunate enough to see him, his wife, or their offspring, the "Daughters of the Creeks". Wasgo is depicted with the head of a Wolf, but the fins of a Killer Whale.

BEAVER is always indicated by prominent teeth and a cross-hatched tail. His patience, wisdom, and craftsmanship earned respect among the tribes, although his cunning ways caused him to be held in some awe. One legend states that it was Beaver who felled trees for the first Indian's home, and another credits him with bringing fire to the Indians. The Beaver is a prized crest of the Eagle Clan, won after a variety of legendary incidents had occurred in which Eagle was the victor.

FROG was often used as a guardian symbol because of his tendency to croak a warning when anything approached. He also was credited with the ability to draw out evil supernatural powers with his tongue, hence he was sometimes carved with a very long one. He figured often in legends dealing with a common theme —that if one member of a community was needlessly cruel to an animal, the whole community would suffer in a violent manner.

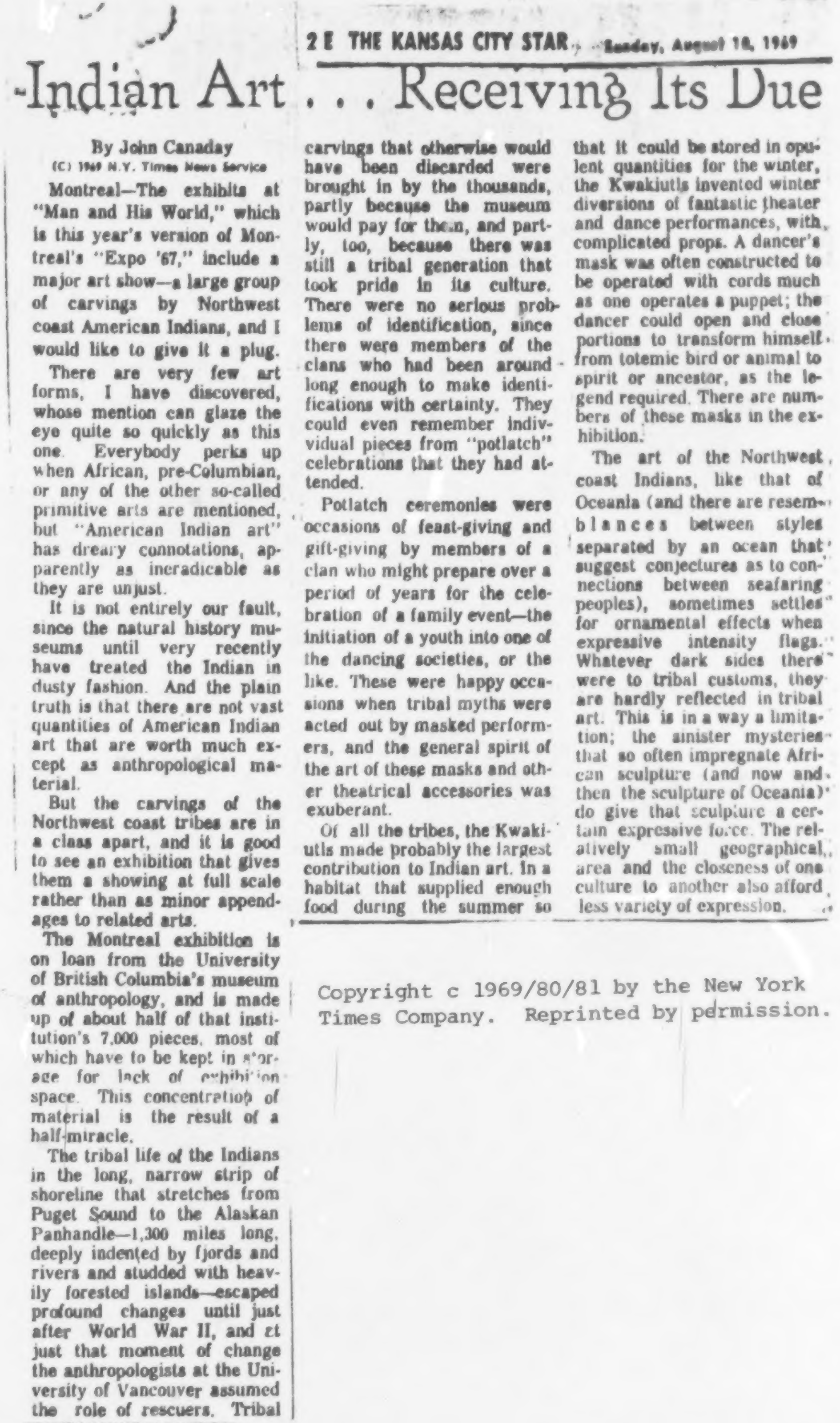
BEAR, as a symbol of earthly power, was sometimes used to indicate the authority of a chief. His short snout, large teeth and paws make him an unmistakable figure, representing a particularly great force and might. One crest, often seen, pictures Bear Mother with her two cubs. This illustrates the myth of the Indian maid who was captured by a Bear, turned into one herself, and married to the son of the chief. She had two sons who were endowed with supernatural powers and who were able to take the form of Bear or Human, at will. She was finally rescued by her brother and returned to her people.

EAGLE was a symbol of wisdom, authority and power. One legend concerns a young man of the Bear clan, punished by his chief by being set adrift in a canoe. The Eagle chief rescued him and permitted him to marry his daughter. Many adventures followed. During one of these, Bear, exhausted by his efforts to subdue and capture a sea creature, is assisted by his Eagle wife.

THUNDERBIRD, lord of the skies and source of the elements, was credited with animal, human and supernatural powers. Legend explained that when storms occurred, Thunderbird was capturing Whale, his only enemy and favourite food. As he sailed over the ocean, looking for his prey, the spread of his gigantic wings would darken the sky. Then, sighting Whale, he would swoop down and thunder was in the flap of his mighty wings and lightning was the flash of his eyes or the fire from his tongue, as he pierced his victim before carrying him off to a mountain retreat. To the Indians, Thunderbird was a great helper and assisted them in many ways. Recognized on totem poles by his long, curved beak. Thunderbird is one of the best-known crests in Indian carving.

Totem poles similar to this one are to be found in the great museums of Europe and North America. They were carved by hand from Argillite, a black stone found in the mountains of the Queen Charlotte Islands. This totem pole is a near replica of an original carving.

Appendix C No. 18



2 E THE KANSAS CITY STAR, Sunday, August 10, 1969

Indian Art . . . Receiving Its Due

By John Canaday

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Montreal—The exhibits at "Man and His World," which is this year's version of Montreal's "Expo '67," include a major art show—a large group of carvings by Northwest coast American Indians, and I would like to give it a plug.

There are very few art forms, I have discovered, whose mention can glaze the eye quite so quickly as this one. Everybody perks up when African, pre-Columbian, or any of the other so-called primitive arts are mentioned, but "American Indian art" has dreary connotations, apparently as ineradicable as they are unjust.

It is not entirely our fault, since the natural history museums until very recently have treated the Indian in dusty fashion. And the plain truth is that there are not vast quantities of American Indian art that are worth much except as anthropological material.

But the carvings of the Northwest coast tribes are in a class apart, and it is good to see an exhibition that gives them a showing at full scale rather than as minor appendages to related arts.

The Montreal exhibition is on loan from the University of British Columbia's museum of anthropology, and is made up of about half of that institution's 7,000 pieces, most of which have to be kept in storage for lack of exhibition space. This concentration of material is the result of a half-miracle.

The tribal life of the Indians in the long, narrow strip of shoreline that stretches from Puget Sound to the Alaskan Panhandle—1,300 miles long, deeply indented by fjords and rivers and studded with heavily forested islands—escaped profound changes until just after World War II, and at just that moment of change the anthropologists at the University of Vancouver assumed the role of rescuers. Tribal carvings that otherwise would have been discarded were brought in by the thousands, partly because the museum would pay for them, and partly, too, because there was still a tribal generation that took pride in its culture. There were no serious problems of identification, since there were members of the clans who had been around long enough to make identifications with certainty. They could even remember individual pieces from "potlatch" celebrations that they had attended.

Potlatch ceremonies were occasions of feast-giving and gift-giving by members of a clan who might prepare over a period of years for the celebration of a family event—the initiation of a youth into one of the dancing societies, or the like. These were happy occasions when tribal myths were acted out by masked performers, and the general spirit of the art of these masks and other theatrical accessories was exuberant.

Of all the tribes, the Kwakiutls made probably the largest contribution to Indian art. In a habitat that supplied enough food during the summer so that it could be stored in opulent quantities for the winter, the Kwakiutls invented winter diversions of fantastic theater and dance performances, with complicated props. A dancer's mask was often constructed to be operated with cords much as one operates a puppet; the dancer could open and close portions to transform himself from totemic bird or animal to spirit or ancestor, as the legend required. There are numbers of these masks in the exhibition.

The art of the Northwest coast Indians, like that of Oceania (and there are resemblances between styles separated by an ocean that suggest conjectures as to connections between seafaring peoples), sometimes settles for ornamental effects when expressive intensity flags. Whatever dark sides there were to tribal customs, they are hardly reflected in tribal art. This is in a way a limitation; the sinister mysteries that so often impregnate African sculpture (and now and then the sculpture of Oceania) do give that sculpture a certain expressive force. The relatively small geographical area and the closeness of one culture to another also afford less variety of expression.

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Appendix C No. 19

Use of Cedar Bark

The materials used by the Northwest Pacific Coast Indians in their art objects came from the natural environment. One very versatile material was cedar bark.

Shredded cedar bark was made from young cedar trees whose bark was not too thick and had no twists in it. The scaly outer bark was removed and the long strips laid over a board or paddle. The strip was held in one hand, while a bark shredder was held by the other, and used to soften the fiber by beating and crushing. When the strip was pliable, it could be split and woven into mats, blankets, clothing or baskets. With more beating, long curls of fluffy fiber would be shredded from the bark.

Philip Drucker wrote that "one could very nearly describe the life of the individual Indian in terms of cedar bark."[1] As a baby, his cradle was lined with the long curls of fluffy, shredded cedar bark and his pillow and head presser were pads of the same material.

Throughout his life he wore woven robes and rain capes of shredded bark to protect him from the cold and rain and on ceremonial and festive occasions he wore turbans, and arm and leg bands twisted and woven of shredded bark. Checkerwork mats of red cedar bark were his principal household furnishings. They served as tablecloths at mealtimes, as upholstery for seats, and as mattresses for his bed.

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[1] Philip Drucker, Indians of the Northwest Pacific Coast (Garden City, New York: The Natural History Press, 1963), p. 61.

Table napkins for his hands were made from the long curls of fluffy fiber.

He stored his carpentering tools in a basket woven of shredded bark and his wife put the lily roots she gathered in baskets made of the same material. The Nootka whale hunter made neat pouches of shredded cedar bark to keep his precious harpoon heads in.

When he died, the chances were that unless he was a chief and entitled to special treatment, his body would be wrapped in a cedarbark mat for burial.

Appendix C No. 20

Totem Pole Park

The Haida

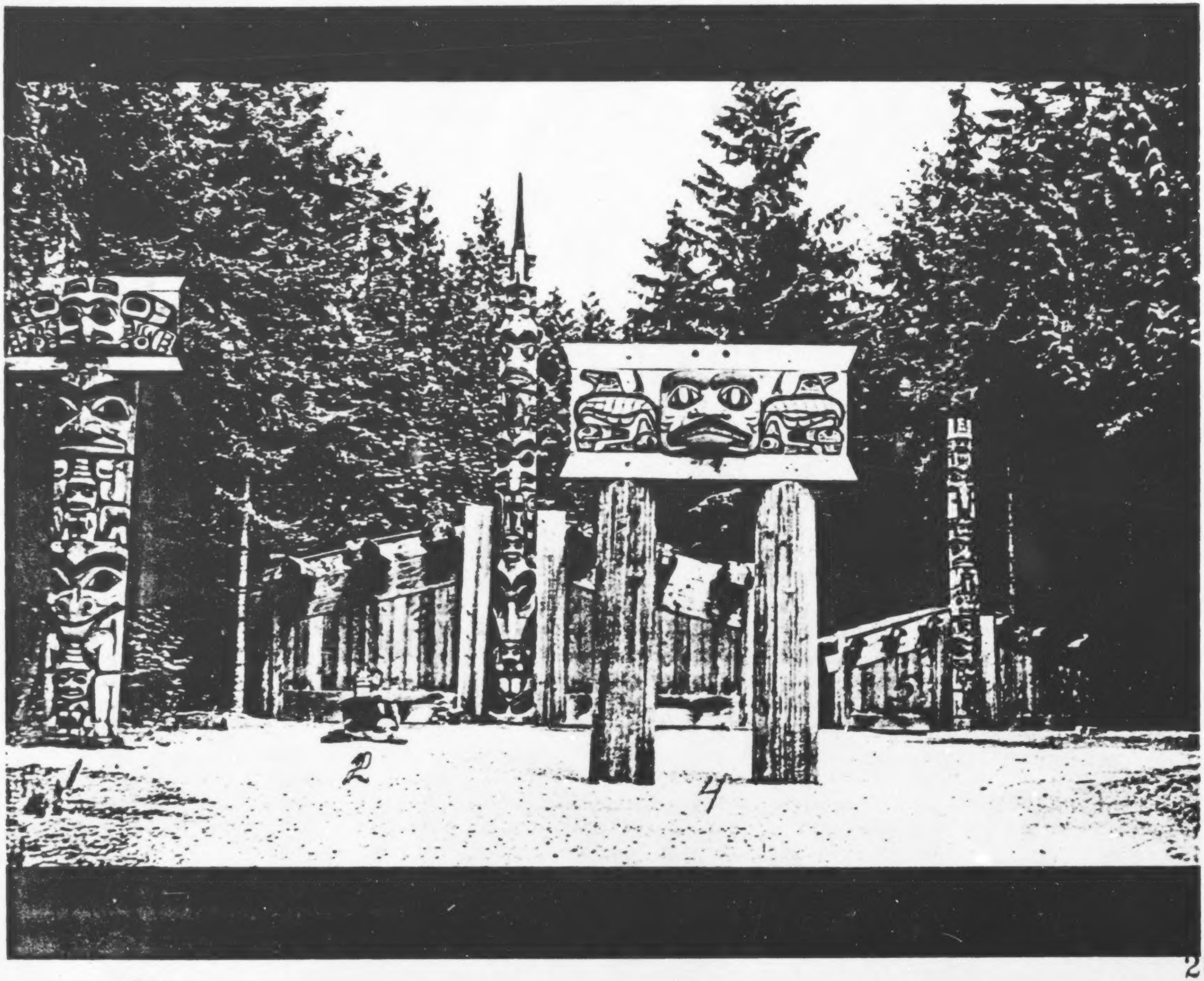
The original plans for Totem Pole Park involved the restoration and installation of various tribal totem poles and house posts in the collection.

At the southwest corner of this park is the Kwakiutl section completed in 1953. The Haida section contains carvings and structures representing the tribal traditions of the Haida of the Queen Charlotte Islands.

In 1959 William Reid under a Canada Council grant undertook this carving. Mr. Reid was already well known as a craftsman in silver and studied further with Mungo Martin in Victoria.

Douglas Cranmer of Alert Bay who had worked with Mungo Martin took part in the Haida project which required two and one half years to complete. These carvings and buildings represent a small segment of a Haida village. They face a highway, the contemporary equivalent of a shore line they would have faced.

Perhaps these poles, one of which follows an older pattern, the others new creations within the disciplining and traditions of Haida are as fine as any which have ever been carved.



Appendix C No. 20

1. Single Mortuary Pole

The pole itself is composed of figures from the Mother Bear Story: the grizzly father below and the human mother above, each holding a child. The frontal board represents an eagle, the head carved in the round and the rest split so that the body, wings and tail appear at either side of the flat surface. Originally the top of the pole behind this board would have been hollowed out to contain a coffin.

2. Separate Figure

This represents a mythical sea-wolf holding three whales - one under its front feet, one in its mouth and its tail around the other.

3. Dwelling House

The frontal pole has three main figures: at the bottom a killer whale, in the middle an eagle and at the top a shark. The killer whale has his tail tucked under him and his flippers at his sides, enclosing a small human figure, which is held around the middle by his split dorsal fin. The eagle holds a sculpin in its claws, frogs emerge from its ears.

The shark with its characteristic downcurving mouth and gill slits, holds the tail of a small killer whale. On the shark are three watchmen, the central one on the back with the dorsal fin passing through his face and hat, the two smaller ones above the pectoral fins. The shark's asymmetrical tail appears at the very top.

4. Double Mortuary Pole

The poles are uncarved; the board represents a shark, the head carved in the round, the body split and spread out on either side.

Originally these poles supported a box containing one or two coffins.

5. Grave House

The frontal pole bears four main figures: a wolf at the bottom, above it a squat round-eyed creature (possibly a frog), in the middle a rather human-looking bear, and at the top a raven. The wolf holds a frog in his mouth and a wolf pup between his legs while a second wolf pup peeks out from between the ears. The frog-like creature has a mosquito's face between its round eyes. The bear holds a small raven between his legs. The big raven above the bear has human forearms and hands; a partly human face decorates its tail, which appears between the ears of the bear. At the very top are three little watchmen.

The grave house was used as a repository for the dead.

Appendix C No. 21

Art of the Northwest Pacific Coast Indians

Art is a part of the total culture in which it is produced and this was clearly shown by the art of the Northwest Pacific Coast Indians. Their materials and symbols were drawn from the natural environment and fashioned in beautiful ways for use in all phases of their ceremonial and everyday life. The storage boxes, wooden spoons, dishes and tools used in preparing food; clothing, masks and headdresses for ceremonies; potlatch gifts; and the massive house posts, totem poles, and utilitarian objects such as fish hooks, and clubs used for killing seals were all objects of art.

Much of the art of the Northwest Pacific Coast Indians was highly stylized but realism was also present. Some of the masks were very realistic, and a realistic carving of an early or middle nineteenth century white man wearing a long frock coat in which the texture is carefully shown by knife strokes, a cap-like hat, and a face which is not Indian in appearance, is part of one museum's collection. It should also be noted that this carving contained enough of the highly stylized "Northwest Coast eyes" to make it possible to identify the origin of the carving.

An artist sees life through the beliefs and rules of the culture in which he lives and consequently uses its style and symbols.

The symbols used by the Northwest Pacific Coast Indians were frequently from the mythology which explained the beginning of the world. For example, a raven was not only a bird, but also a mythological creature with great supernatural power.

The symbol for a particular animal was sometimes representative of the entire animal, but other times was one or more details of the complete symbol. The abbreviated symbol thus became a "shorthand symbol" for the recognition of the animal.

The raven was often represented not by its complete symbol but by a large straight beak, or if its body was shown by very pronounced claws. These details, or "shorthand symbols" were frequently used on smaller objects, such as ceremonial rattles, where space was limited.

A common detail used for the hawk was a hooked beak turned back to his face, and for the kingfisher a short, strong beak, with no body, but a stubby, stiff tail.

One of the most used symbols of the Northwest woodcarver was the killer whale. It was often represented by a round, compact body with a dorsal fin for the principal detail. In other designs its body was slightly elongated and curved. Its mouth, when shown, was large with heavy teeth.

Many other animals, real and mythical, were used in design. Among these were the eagle with a strong beak curved at the end; the thunderbird with a strong beak and a top-knot of feathers; the beaver with large incisors and a cross hatched tail, and the shark with a sad face, wrinkled forehead, and a mouth generally turned down at the sides and filled with triangular teeth.

The space to be decorated led to various design techniques. One frequently used was to arrange the design so that the figure shown appeared to be two animals facing each other, when in reality the artist had split the one figure and arranged it so that two profiles faced each other. Another technique was to show the inside, as well as the outside, of the animal in the same picture. This is now called an x-ray picture.

The design area of art of the Northwest Pacific Coast was completely filled. Vacant spaces as well as the surface around them were decorated with the figures of the animals used. Lines which started realistically often became purely decorative. Texture was used to give variety to the design as was the use of tapered and swelling lines.

Stylized design "fillers" were also used. Eye-forms were frequently used in this way, especially to represent a joint in the body of the main animal. These eye-forms are frequently spoken of as "Northwest Coast eyes."

The stylistic art of the Northwest Pacific Coast Indians emphasized applied design and formalization of representation.

Vocabulary and Terms Related to Art of the Northwest Pacific Coast Indians

argillite	- shiny, black, highly-polished stone found in the mountains near Skidgate, in the Queen Charlotte Islands and used by the Haida Indians to carve elaborate art objects.
copper metal	- a native metal which was traded down from the north. It came in soft lumps and was treated simply by hammering it into thin sheets and by making it into small ornaments such as bracelets, nose and ear ornaments and gorgets.
crests	- painted or carved motifs. The motifs were representations of animals or supernatural beings that were supposed to have assisted the legendary ancestors of the social divisions, or had been the original ancestors of the various tribes of the Northwest Pacific Coast Indians. They were used for display, and were often called totems.
greenstone or nephrite	- a stone found along the Fraser River used by the Northwest Pacific Coast Indians for making adze and chisel blades. It is a smooth transculent material with much the same range of coloring as jade and which can be polished to a beautiful finish.
motifs	- symbols of the supernatural beings, in animal, monster, or human form, who according to lineage or clan traditions had appeared to some ancestor, or had transformed itself to human form and became an ancestor. In either case the descendents of that ancestor inherited the right to display symbols of the supernatural beings to demonstrate their noble descent.

pictorial forms	- animal forms that decorated objects made by the Northwest Pacific Coast Indians. These were ancestral heroes who helped found the history of man, animal beings who helped to invent and teach new ways, and family animal heroes who showed bravery or cunning in a crisis.
totem poles	- a pole or pillar carved and painted with totemic symbols set up before the houses of certain tribes of Northwest Pacific Coast Indians.
x-ray picture	- design form of an animal in which the whole animal was constructed, inside as well as out, showing the pattern of the spine, vertebrae, and ribs, with joints and sockets shown in position.

APPENDIX D

Evaluation Instruments

Appendix D No. 1

Test Items for Various Behavioral Aspects of the Objectives*

1. Familiarity with a Large Number of Words.
   Test items numbered: 16, 20, 24. All of the items in the Vocabulary Test.

2. Recall of Specific Facts.
   Test items numbered: 17, 18, 19, 22.

3. Knowledge of Generalizations
   Test items numbered: 1, 2, 3.

4. Ability to Interpret and Draw Inferences from Various Types of Data.
   Test items numbered: 6 (last 4 questions), 7, 12, 15, 21, 25, 27.

5. Ability to Apply.
   Test items numbered: 4, 5, 9, 10, 13, 14, 26.

6. Ability to Distinguish Fact from Opinion.
   Test item numbered: 28.

7. Skill in Reporting Using Good Organization of Ideas and Statements.
   Test item numbered: 29.

8. Ability to Form Concepts and Arrive at Generalizations.
   Test items numbered: 8, 11, 23.

9. Ability to Judge the Relevancy for a Particular Use.
   Test items numbered: 6 (1, 2, 3, 4, 5).

10. Active Interest in.
    All of the items in Interest Questionnaire on Indian Cultures.

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*Items for the first nine behavioral aspects came from What Do You Know About Indians? Items for the last behavioral aspect came from Interest Questionnaire on Indian Cultures. The items on the Vocabulary Test were for the first behavioral aspect.

Appendix D No. 2

What Do You Know About Indians?

Directions: Each of these questions tells you what to do. Read each one carefully and then do what it tells you to do. If it is a multiple choice question, draw a ring around the letter or letters that show the correct answer.

1. Which of the following is the best description of the source of food of the ancient Indian communities of the Northwest Coast?
   a. They depended primarily on the buffalo for much of their food supply.
   b. They depended almost entirely on the sea and rivers for their food supply.
   c. They depended primarily on their crops for their food.
   d. They depended on hunting small forest animals.

2. Which of the following is the best generalization about primitive cultures and modern cultures?
   a. Both primitive and modern people depend on their environment and their own skills for everything they need.
   b. Both primitive and modern people depend on securing materials from a distance and hiring people with skills for getting things they need.
   c. Primitive people depend on their environment and their own skills for everything they need, while modern people depend on hiring skilled labor and getting materials from a distance as well as close at hand.

2. d. Primitive people depend on getting materials from a distance while modern people depend on their own environment for things they need.

3. The Indians of the Northwest Pacific Coast and the Southwest Desert belonged to tribes which were very different from one another. But they all had certain things in common.

Below are some statements. If the sentence is true, put Y in front of it. If it is not true, put N in front of it.

____ The Indians all loved the sky, the seas, the mountains, the forests and the animals that lived in them.

____ The Indians used the materials they found in nature for their art.

____ They honored their gods and spirits in their art.

____ Folklore tales were used to teach the Indian children that there was a place for all living things.

____ Only the Hopi Indians had creation myths.

____ Some Indian art such as totem poles was done only in the Northwest Pacific coast area.

4. Suppose the Hopi Indians had awakened one morning and found themselves on the western side of Vancouver Island. Which of the following would best explain what would likely have happened?

a. They would have continued to make their houses of roughly dressed sandstone or sun dried brick because this is all they would know how to do.
b. They would have made houses of wood because primitive people use what is around them to make their homes.
c. They would have made wigwams.
d. They would have perished because they had no houses.

5. Suppose a four year old Kwakiutl Indian boy was captured by a band of Crow Indians and lived with them the rest of his life. Which of the following would most likely be true.

a. He would live like the Kwakiutl Indians because he was a Kwakiutl Indian.
b. He would do some things like the Kwakiutls and some things like the Crows because the Crows would make him do some things as they did.
c. He would live as the Crow Indians lived because the culture under which a person grows up has a powerful influence on him throughout life.
d. He would pretend to be a good Crow Indian because he would be afraid they would kill him if he acted like the Kwakiutl Indians.

Appendix D No. 2

6. Read these three paragraphs:

A little girl went to the forest to pick berries, and she got lost. She wandered about for a long time looking for the way home, but she couldn't find it. Now it was growing dark, and she was tired, so she stopped wandering about. She ate some berries, and drank some water from a pool, and then she made herself a bed of pine needles and lay down.[1]

* *

He (Otter) dived back into the river and came up with a fine fat salmon in his mouth. The salmon was so big that Otter could hardly hold it. "Give her that," he said, and dragged the salmon on to the bank.

Little Girl picked some herbs she found growing amongst the rocks and stuffed the salmon. Then she found some blueberries and made a tart.[2]

There are a number of clues in these paragraphs that can help us find out where the little girl lived. Write five of these clues here:

1. ______________________________

2. ______________________________

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[1] Ruth Manning-Sanders, Red Indian Folk and Fairy Tales (London: Oxford University Press, 1960), p. 7.

[2] Ibid., pp. 10-11.

3. ______________________

4. ______________________

5. ______________________

In what river could Otter have caught the salmon?

____

Why do you think so? ______________________

To what group of Indians would you guess that this little girl belonged? ______________________

Why? ______________________

7. Read each of these paragraphs carefully.

The Southeasterners farmed on a large scale. They lived in solidly built houses of wood bark, thatch and reeds. They had a noble religion, lived comfortably, made good pottery and wove fine cloth out of thread spun from wild fibers.

The Northwest Coast is one of the great fishing territories in the world. There was an unlimited supply of food. The people living here learned to store their catches of salmon so they had food all year. They lived comfortably in large wooden houses, had great skill in working with wood, developed wood carving and basketry to a high degree and were fairly skillful in weaving.

The Southwesterners were dedicated to agriculture. They showed a skill at dry farming and developing varieties of corn that would grow in dry areas that we have never equalled. Farming became a man's occupation. The women stayed home and beautified their basketry and pottery. They lived in comfortable apartment-like houses, had a well developed religion, made fine basketry and pottery.

Two of the following conditions were present in each of the cultures described in the paragraphs you just read. What were they?

a. They spent time making beautiful things.

b. They were farmers.

c. They made beautiful pottery.

d. They had plenty of food without spending all of their time getting it.

8. Which two of these statements best explain what is shown by the facts in the three paragraphs you read?

a. When people learn to store their food, they do not have to go wandering and can have more permanent homes.

b. When people have plenty of food without devoting all of their time to getting it they have spare time to devote to other things.

c. The type of environment in which people live determines the kind of pottery they make.

d. Every person has a particular role in the culture to which he belongs.

9. Which of the following is the best explanation for the Pueblo being the most famous of the Southwestern cultures?
   a. In a dry country the remains that people leave behind them lasts much longer.
   b. In a dry country where there is little vegetation it is easier for archaeologists to spot the right place to dig.
   c. The culture of the Pueblos is well continued by their modern descendants.
   d. There are many ruins of the Pueblo people and their culture is continued by their modern descendants.

10. Which of the following is the best description of the pattern of society of the Northwest Pacific Coast Indians?
    a. A system of social classes ranging from what might be called nobility at the top to the slaves at the bottom.
    b. A system of social classes in which all people moved up and down with comparative ease.
    c. A system of fixed castes that was never broken which ranged from the nobility at the top to the slaves at the bottom.
    d. A system in which there was no distinction in social classes among the people.

11. Micco was a Seminole Indian boy. When he was four years old, he began to help his father and mother with their work. He did not go to school, but his parents and grandparents taught him everything a Seminole should know.

He learned to carry water from a spring to the wigwam where he lived. At first he carried it in a little gourd which his mother gave him. As he grew older, she gave him bigger ones so he could carry more water at a time.

His mother took him with her when she worked in the garden. His father showed him how to use the bow and arrow. He showed him alligators and water snakes when they were going through the swamps in their dug-out canoe. Micco knew he must learn to defend himself against alligators when he was old enough to be a hunter.

His grandfather told him stories about how people would sink into mud and water if they stepped in the shallow water filled with sawgrass.

Which of these statements best summarizes what the story tells?

a. Micco learned from being shown how to do things.

b. Micco began to help his parents when he was very young.

c. Micco was taught by his family showing him, telling him stories, and letting him help them.

d. Micco was taught to carry water and to stay away from the swamps filled with sawgrass.

12. Bessie Hatch
Of old potlatch
Came up with a match
That put her in the winning circle

This is part of an advertisement that was used by an oil company. It implies that

a. Bessie was an Indian of the Northwest Pacific Coast.
b. Bessie drew a prize which was more expensive than any gift she had given or received.
c. Bessie was playing a game with matches.
d. Bessie found a match.

13. Which of the following statements best explains why the division of people into culture groups follows almost exactly the division of a country into geographical areas?

a. The way in which each cultural group of Indians lived was determined largely by the ways they found for solving problems connected with group living.
b. The way in which each cultural group of Indians lived was decided largely by the kind of country they lived in and the nature and amount of the food supply.
c. The way in which each cultural group of Indians lived was determined by the familiar skills and customs they took to their new home.

d. The way in which each cultural group of Indians lived was decided largely by the chiefs of the various tribes.

14. Why has it been said that "It is no accident that the population centers of pre-historic peoples of this continent were in the same general locations as our major cities?"

    a. Prehistoric people settled where they could best meet their needs of food, clothing and shelter. People living today have the same basic needs and have built cities where these needs can be met most economically.
    b. Most of our major cities had their beginnings before people had transportation which could bring what they needed from a distance. So they were started near where their needs could be met as had population centers of pre-historic people.
    c. Most of our major cities were started by the white man setting up trading posts where descendants of pre-historic people lived. More and more people came and continued to live there until modern times.
    d. People are creatures of habit. They get accustomed to living in one place and just continue living there.

15. Select the generalization on the right which is closely related to each statement on the left. Put the letter of that generalization in the blank before the statement. A generalization may be used more than once or it might not be used at all.

Appendix D No. 2

____ The Hopi's planted their corn seed nearly a foot deep and put from 10 to 20 seeds in each hole.

____ Upon marriage, in the Hopi tribes, the male members of the clan move in with the families of their wives.

____ Sometimes after a slaying among the Tlingits, a noble of the slayer's lineage would don his finest ceremonial clothes. Then he would go out of his house dancing one of the slow dances of his lineage to his waiting foes who allowed him to come within a few yards before they killed him.

____ Children were trained to live peacefully with the people around them. When they became men and women, they considered war something that took people away from maintaining a good life of farming.

____ The natural wealth of food supplies and materials made possible the system of competitive ranking and potlatches among the Northwest Coast Indians.

Generalizations

a. The nature of the environment in which people live determine many aspects of culture.

b. The culture under which a person matures exerts a great deal of influence on him throughout his life.

c. The world into which every individual must fit is determined by its culture.

16. The National Park Service awarded some people at the University of Missouri-Columbia, a large amount of money to investigate prehistoric Indian sites in the area which was later covered with water by the Truman Dam. This kind of investigation is called
    - a. historical investigation
    - b. interpretative archaeology
    - c. ethnology
    - d. salvage archaeology

17. Which of the following explains why you answered Item No. 16 as you did?
    - a. This kind of investigation involves present day excavations to see if artifacts of the past can be found.
    - b. This kind of investigation involves studying the past that was written down as it happened.
    - c. This kind of investigation involves interpreting the past by our knowledge of the present.
    - d. This kind of investigation involves studying stone writing.

18. If the people investigating this prehistoric Indian site found artifacts the first thing they would do would be
    a. to measure the exact location where it was found, make notes about it, perhaps take a picture of it and then put it in a sack labelled for the particular square or rectangle where it was found.
    b. to carefully pick it up, brush it off with a paint brush and take it to the man in charge of the excavation.
    c. to put a number on it and then record the number in a book.
    d. to take a picture of it and then put it in the sack labelled for the square where it was found.

19. Which of the following explains why you answered Item No. 18 as you did?
    a. Archaeologists might want to know whether they had an artifact with a particular number.
    b. Artifacts should be clean before they are put away.
    c. A picture of an artifact would help the archeaologist recall where he found it.
    d. An artifact only tells a story when its relation to other objects is known.

Appendix D No. 2

20. Directions: In each group below draw a line around the lettered word or phrase which most nearly corresponds in meaning to the word at the head of that group.

1. potlatch
    - a. kitchen utensil
    - b. great feast
    - c. animal
    - d. vegetable

2. kivas
    - a. rain dances held at planting time
    - b. deserts
    - c. prayer sticks
    - d. large rectangular rooms often underground

3. shamans
    - a. deer-like animals
    - b. tent-like homes
    - c. medicine men
    - d. waterways

4. Olachen
    - a. a fish
    - b. an animal
    - c. a plant
    - d. a rock

5. Nootka
    - a. Southwestern Indian tribe
    - b. Northwest Pacific Coast tribe
    - c. Rain dance of Desert Indians
    - d. Marriage feast of Northwest Pacific Indians

6. dendrochronology
    a. tree-ring dating
    b. picture writing
    c. stone writing
    d. successive layers of occupany at any site

21. On the left-hand side are some of the customs practiced by the Northwest Pacific Coast Indians. On the right are some of our customs. In the blank space before each of the Northwest Pacific Coast Indians' customs put the letter of the custom we have which is similar.

Northwest Pacific Coast Indian

____ Put family crests on ceremonial clothing.

____ A potlatch feast was held when a chief's child was three or four years old so he could be given a name.

____ Beautiful art objects were made for the potlatches.

____ Potlatches were given when the daughter of a chief got married.

____ At a potlatch chiefs of high rank were seated in certain parts of the house reserved for nobility.

Kansas City People

a. Children are frequently christened in the church while quite young.

b. Monograms are often put on our clothing and other possessions.

c. Artists are frequently commissioned to make a statue or mural for an important occasion.

d. Receptions are often held after a couple gets married.

e. At formal dinners, high ranking government officials are seated according to position rank.

Appendix D No. 2

22. In the following account some words have been left out. Complete the account by writing one word on each blank so that it will tell who did the digging, what people lived there, and how they found out how old the artifacts were.

How do we know so much about these people who left no records and vanished before there was any history written down? ____________________ dug up the physical things the prehistoric ______________ people left buried in the dry desert sand--their buildings, pots and baskets, tools, weapons, and clothing. By a method called ____________________, which means studying the tree ring sequence in house beams and other pieces of wood, they have been able to figure out how old the buildings and the articles in them were.

23. "Wandering bands of primitive Shoshoni, living in the parched deserts of the Great Basin, found food in the region's sparse and spiny plants, in grasshoppers, and fly larvae scraped from the alkaline lakes. They made nets to trap the fleet jack rabbit and, for lack of better material, built their rude shelters of brush."[3]

Which of the following best summarizes what is described in the above paragraph:

a. The culture under which a person grows up has a powerful influence on him throughout his life.

b. Every person has a particular role in the culture to which he belongs.

c. Whatever the environment or stage of development people find how best they can turn this environment to their own ends.

d. Young people in a culture learn how to cope with the environment from the older people in the culture.

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[3] Mathew W. Stirling, Indians of the Americas (Washington, D.C.: National Geographic Society, 1955), p. 20.

24. Some tribes reckon descent through the mother and others through the father. Descent through the fathers is called

    a. patrilineal

    b. matrilineal

    c. patrilocal

    d. matrilocal

25. One theory says that the type of cooperation necessary for a tribe to live the way it wishes is the reason why some tribes trace descent through the mother and others through the father.

    Suppose that an Indian tribe was constantly at warfare with a neighboring tribe. Because men did the fighting patrilocal marriage rules were practiced. That is the man brought his bride to live with his family so he could still be with his family and help with the fighting.

    Now pretend that some white people settled in the area and made laws prohibiting warfare among the tribes. Pretend that these white people also liked the acorn flour the women of the tribe made and that they were anxious to trade things the Indians wanted for all of the acorn flour the Indian women would make for them.

Who now would be the most important in the tribe?

a. the women

b. the men

c. the children

d. the chief

26. What type of descent might this tribe have after a long period of time if the trading described in Item No. 25 continued?

a. matrilineal

b. patrilineal

c. matrilocal

d. patrilocal

27. New cultural elements are constantly being made by combining old cultural elements in new ways. But not all of these survive, or are used by the people, in a culture. Whether or not they survive depends on

a. Whether or not they work in the existing culture.

b. Whether or not they are made by men or women.

c. Whether or not the people in leadership positions like them.

d. Whether or not the people who made them will let others use them.

Appendix D No. 2

28. Some of the following statements are fact and some are opinion. In the blank before each statement

Put F if it is a fact
Put O if it is an opinion

____ The Northwest Pacific Coast Indians were smarter than the Hopi Indians.

____ Prehistoric Hopi Indians lived in the southwestern part of the United States.

____ Art objects were made for the potlatches.

____ People in the midwest have more fun than the prehistoric Indians.

____ The ocean provides food for the Nootka Indians.

29. Write a paragraph describing why the Indians of the Southwest are said to be the first apartment dwellers. Your paper must not only explain why these Indians were the first apartment dwellers but must also be written in good composition form.

Appendix D No. 3

KEY

What Do You Know About Indians?

1. b

2. c

3. y, y, y, y, n, y

4. b

5. c

6. Some of the clues are:

    The girl went to the forest
    The girl went to pick berries
    The girl made a bed from pine needles
    Otter caught a salmon in the river
    Otter helped the girl by giving her the salmon
    The girl prepared the salmon to eat
    The girl found some blueberries

    Otter could have caught the salmon in the Columbia River, Fraser River, Nass River, Skeena River.

    He could have caught it in one of these rivers because the salmon went upstream in these rivers to spawn.

    The little girl probably belonged to the Northwest Pacific Coast Indian group.

    She probably belonged to this group because of how she was getting food from the forest and river, the type of food she was getting, the help she was getting from an ancestral animal, and how she made herself a bed.

7. a d

8. a b

9. d

10. a

11. c

12. a b

13. b

14. a

15. a, b, c, b, a

16. d

17. a

18. a

19. d

20. 1 - b

    2 - d

    3 - c

    4 - a

    5 - b

    6 - a

21. b, a, c, d, e

22. archaeologists Hopi dendrochronology

23. c

24. a

25. a

26. a

27. a

28. 0, F, F, 0, F

29. Give twice as much credit for correct content as for correct composition form and mechanics of English.

Appendix D No. 4

Interest Questionnaire on Indian Cultures

Purpose: The purpose of this questionnaire is to identify some of the things you found interesting in your study of Indian cultures, and other things you would like to know about them.

Directions: Below are some questions to read and answer by putting Y, N, or U in the space before each question:

Put Y if your answer to the question is YES.
Put N if your answer to the question is NO.
Put U if you are uncertain about the answer to the question.

_____ 1. Do you wish you had more time to read about Indians.

_____ 2. Is it usually impossible for you to read as long as an hour about Indians without becoming bored?

_____ 3. Are you interested in knowing more about how Indians of today live?

_____ 4. Are you interested in knowing more about what Indians of today do?

_____ 5. Is there any particular Indian tribe that you would like to read more about at present?

_____ 6. Do you like to follow news about Indians on radio, TV, or in the newspapers?

_____ 7. Do you ever read books about Indian life apart from school requirements?

_____ 8. Have you ever done more reading or talked to other people in an attempt to learn more about the Northwest Pacific Coast Indians or the Southwest Pueblo Indians?

_____ 9. Do you read books about Indians simply because your teacher urges you to do so?

_____ 10. Is it unusual for you, of your own accord, to look up information about the life of an author of an Indian book?

_____ 11. Do you enjoy learning about the life and work of Indians who lived long ago?

Appendix D No. 4

____ 12. Do you often become so absorbed in reading Indian books that you hardly know what is going on?

____ 13. While you are reading about Indians, do you often feel as if you were participating in the events described by the author?

____ 14. Is it unusual for you to become so enthusiastic about a book about Indians that you tell several of your friends and suggest they read it?

____ 15. Is it unusual for you to compare two or more accounts about Indians and come to a decision about why they agree or disagree?

____ 16. Does reading about Indians help you understand why people act as they do?

____ 17. Does reading about Indians help you understand why they hold attitudes and beliefs that seem strange to you?

____ 18. Does reading about Indians' marriage customs help you get insight into marriage customs of other people?

____ 19. Does reading about the customs of different Indian tribes make you think about how your pecularities may appear to other people?

____ 20. Do you find that reading books about Indians is of little use in helping you understand our culture?

____ 21. Is it very unusual for you to gain from your reading about Indians a better understanding of some of the things we do today?

____ 22. Do you know some books about Indians you would like to read?

____ 23. Are you interested in knowing more about Indians of the Southwest and Northwest Pacific Coast?

____ 24. Would you like to know more about the way Indians of long ago lived?

____ 25. Do you ever read books about Indians in your free time?

Appendix D No. 5

KEY

Interest Questionnaire on Indian Cultures

The following answers indicate an active interest in Indian cultures:

1. Y
2. N
3. Y
4. Y
5. Y
6. Y
7. Y
8. Y
9. N
10. N
11. Y
12. Y
13. Y
14. N
15. N
16. Y
17. Y
18. Y
19. Y
20. N
21. N
22. Y
23. Y
24. Y
25. Y

Appendix D No. 6

Vocabulary Test

Purpose: The purpose of this test is to find how familiar you are with the meaning of some of the words you met in Three Cultures.

Directions: Read each meaning carefully.
Select the word, from the list of words at the end of the test items, which tells what the meaning is about.
Put the letter which is before that word on the blank at the left of the meaning.

_____ 1. This person is one kind of cultural anthropologist who studies living societies.

_____ 2. It is a way of living. It is the ideas, knowledges, beliefs, and systems of behavior people have learned by being a member of a society. It is a group of people's way of adapting to their environment.

_____ 3. These people study culture. They study the societies that have been developed by various people over the years.

_____ 4. Objects that have been made by people.

_____ 5. The time before writing was invented.

_____ 6. People who study the written records of the past.

_____ 7. The study of prehistory.

_____ 8. Examining sites for prehistoric artifacts before a building goes up, a new road is built, or where a farmer is plowing a field.

_____ 9. The past that has been written down as it happened.

_____ 10. If there are wooden rafters or other pieces of wood that have not rotted, archaeologists can often find the dates people made the structures by this method.

_____ 11. The method that dates plants and animals according to the amount of this particular chemical element present.

_____ 12. This person studies the science of the structure of the earth and its history, especially as recorded in the rocks.

_____ 13. This type of anthropologist studies bone structure and is especially interested in the spine, skull, femur, and pelvis.

_____ 14. People who are skilled in tracing pedigrees or descent of persons or families.

_____ 15. A huge, elephant like animal that no longer exists on the earth.

_____ 16. To move from one country to locality to another for permanent residence.

_____ 17. That which has been acquired by study or observation, and experience.

_____ 18. An established practice, habit, or usage.

_____ 19. A refuse heap marking the place of primitive habitation.

_____ 20. Scientists who seek evidence of the past from studying the location, kinds and age of fossils, the location and kinds of bones of animals, and the types of native and imported plants.

a. ethnographer

b. cultural anthropologists

c. culture

d. midden

e. prehistory

f. artifacts

g. historians

h. geologist

i. archaeology

j. salvage archaeology

k. history

l. tree ring dating

m. carbon 14 dating

n. physical anthropologist

o. migrate

p. mastodon

q. hominid fossils

r. custom

s. knowledge

t. genealogist

u. family

v. palaeontologists

w. wisdom

x. environment

Appendix D No. 7

KEY

Vocabulary Test

1. a
2. c
3. b
4. f
5. e
6. g
7. i
8. j
9. k
10. l
11. m
12. h
13. n
14. t
15. p
16. o
17. s
18. r
19. d
20. v